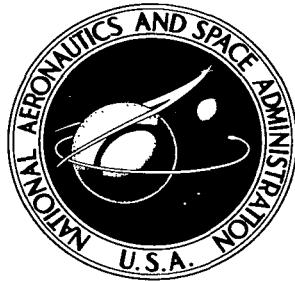


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PROVISIONAL HOURLY VALUES OF  
EQUATORIAL Dst FOR 1961,  
1962, AND 1963

by Masahisa Sugiura and Shirley Hendricks  
Goddard Space Flight Center  
Greenbelt, Md.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION • WASHINGTON, D. C. • AUGUST 1967



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## ABSTRACT

Provisional hourly values of equatorial Dst (Storm Time Variation) are given for the years 1961 to 1963. Magnetic Observatories at Hermanus, Alibag, Kakioka, Apia, Honolulu, San Juan, Pilar, and M'Bour were used for 1961; and Observatories at Hermanus, San Juan, and Honolulu were used for 1962 and 1963. The method of data reduction is similiar to that employed for the IGY (International Geophysical Year) data, but several improvements have been made. In particular, the secular change was removed from the data for each station for 1962 and 1963.

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# **PROVISIONAL HOURLY VALUES OF EQUATORIAL Dst FOR 1961, 1962 AND 1963**

by

Masahisa Sugiura and Shirley Hendricks  
*Goddard Space Flight Center*

## **INTRODUCTION**

For the International Geophysical Year, July 1957 to December 1958, hourly values of equatorial Dst were computed using hourly values of the horizontal component, H, obtained at eight magnetic observatories.\* These hourly Dst values have provided a measure of magnetic activity as a function of universal time, and have been useful for studies of cosmic rays, solar plasma, particles in the radiation belt, and other geophysical disturbance phenomena.

The present report gives Dst data for the years 1961 to 1963. The method of deduction is similar to that used for the IGY, but several improvements have been made as is explained below. For the method of analysis the reader is referred to the previous publication.\* Only brief explanatory notes are given in the present report.

## **REMOVAL OF THE QUIET DAILY MAGNETIC VARIATION Sq**

In the determination of Dst for the IGY, Sq was removed by the following method. For each observatory the mean daily variation for the five international quiet days was formed for each month. The non-cyclic change was removed from the mean Sq so determined by assuming that the former is linear in time. The residual Sq is the average over the observatories of the mean Sq corrected for the non-cyclic change, and hence it is a function of universal time (UT) and does not depend on local time. The residual Sq for the 18 months of the IGY was expressed in a double Fourier series with a month number M (= 1 to 18) and a UT hour number (= 1 to 24) as two variables. A synthetic residual Sq was then calculated with this Fourier series for each day, and was subtracted from the hourly values averaged over the observatories.

In deriving Dst for 1961 to 1963 an improvement was made in the method of removal of Sq. Sq was first formed separately for each observatory and for each month from the five 'local' days that have a maximum overlap with the five 'international' quiet days. The non-cyclic change was

\*Sugiura, M., "Hourly values of equatorial Dst for the International Geophysical Year," in *Annals of the International Geophysical Year*, Vol. 35, pp. 9-45, Oxford: Pergamon Press, 1964.

removed from Sq by assuming that it was linear from midnight to midnight on the 'local' quiet days selected. The series of observatory-Sq determined for each year by this method was expanded in a double Fourier series with the month number and local time as variables. Using this Fourier series, hourly values of a synthetic Sq variation were computed and were subtracted from the original hourly values. This procedure was followed for each observatory, and the resultant series of hourly values was averaged over the observatories.

For 1961 the observatories used are Hermanus, Alibag, Kakioka, Apia, Honolulu, San Juan, Pilar, and M'Bour. These eight observatories are the same as those used for the IGY. For 1962 and 1963, data were less complete than for the earlier years, and only three observatories, Hermanus, San Juan, and Honolulu were used; these three observatories being approximately equally spaced in longitude.

## THE REFERENCE LEVEL

For the IGY the reference level, or the zero level, for Dst was defined by the average of hourly Dst values over the quiet periods in which two or more successive days had the *ap* index not exceeding 7. For 1961 a similar, but simplified method was used to determine the reference level. However a considerable improvement was made for 1962 and 1963 by taking into account for each observatory the secular variation that was completely ignored in the determination of Dst for the IGY and 1961.

## CORRECTIONS FOR THE SECULAR VARIATIONS

In order to obtain a long series of Dst values covering many years with a meaningful common reference level it is necessary to correct for the secular variations. Such a correction was made in deriving Dst for 1962 and 1963.

For each observatory the annual mean value,  $y$ , of the horizontal component for the monthly selected ten quiet days was expressed in a power series

$$y = y_0 + a_1 x + a_2 x^2 ,$$

where  $y_0$ ,  $a_1$ , and  $a_2$  are constants and  $x$  is the time measured in years from 1960.5.

For Hermanus and San Juan, the constants  $y_0$ ,  $a_1$ , and  $a_2$  were determined by the method of least squares using the data for ten years from 1954 to 1963. For Honolulu the secular variation was determined for two periods; one from 1951 to 1960, and the other from 1960 to 1963. This division was made because the location of the Honolulu Magnetic Observatory was moved in 1960. The Observatory was at Barbers Point from 1947 to 1960, and was moved to a new site near Ewa Beach on Oahu Island, the distance between these two locations being approximately 10 km.

Values of the coefficients in the power series for the secular variation are given in Table 1 with the significance level expressed by 0, 1, 2, or 3. The latter is based on the confidence level in a *t*-test according to the following scheme:

Significance level	Confidence level
0	above or equal to 99%
1	above or equal to 95% and below 99%
2	above or equal to 50% and below 95%
3	below 50%

Table 1

Values of  $y_0$ ,  $a_1$ , and  $a_2$  for the Four Observatories.  
(Significance levels are given in parentheses.)

Coefficient	Hermanus 1954-1963	San Juan 1954-1963	Honolulu	
			1951-1960	1960-1963
$y_0$	12900.800 $\gamma$ (0)	27657.540 $\gamma$ (0)	28377.036 $\gamma$ (0)	28107.399 $\gamma$ (0)
$a_1$	-74.830 (0)	5.478 (0)	-18.342 (0)	-3.600 (2)
$a_2$	0.091 (3)	-0.602 (1)	0.106 (2)	-3.000 (2)

The results in Table 1 show that the constant term  $y_0$  and the coefficient  $a_1$  of the linear term in the power series are highly significant except for the four-year period for Honolulu. This period is too short for the statistical test to be meaningful. However, even for this short period the fit is very good (Table 2c). Tables 2a, 2b, and 2c show comparisons of the given observed values and the computed values; the standard deviation is also provided in each table.

Table 2a

Observed and Computed H for Hermanus.  
Standard deviation = 4.4 $\gamma$ .

Epoch	Observed* H	Computed H	Difference
1954.5	13348 $\gamma$	13353 $\gamma$	-5 $\gamma$
1955.5	13281	13277	4
1956.5	13204	13202	2
1957.5	13128	13126	2
1958.5	13054	13051	3
1959.5	12974	12976	-2
1960.5	12893	12901	-8
1961.5	12825	12826	-1
1962.5	12755	12752	3
1963.5	12678	12677	1

\*Mean of ten quiet days

Table 2b

Observed and Computed H for San Juan.  
Standard deviation = 4.4 $\gamma$ .

Epoch	Observed* H	Computed H	Difference
1954.5	27604 $\gamma$	27603 $\gamma$	1 $\gamma$
1955.5	27613	27615	-2
1956.5	27623	27626	-3
1957.5	27637	27636	1
1958.5	27652	27644	8
1959.5	27653	27651	2
1960.5	27651	27658	-7
1961.5	27660	27662	-2
1962.5	27666	27666	0
1963.5	27671	27669	2

\*Mean of ten quiet days

## TABLES AND FIGURES OF Dst FOR 1961, 1962, AND 1963

For 1962 and 1963 the hourly values were measured from the reference level computed by the method described above. In using the power series, each hour was expressed in units of years, but it would have made little difference if the reference level was taken to be the same within each day or even within each month.

The annual mean values of H for ten selected quiet days were used for the basis of the reference level, because these values were readily available in the observatory books. Because of this choice of the annual mean H the average effect of the ring current on those quiet days was subtracted from Dst. It is desirable to use a mean value of truly quiet days rather than the mean of the ten quiet days selected for each month. This point will be investigated in future determinations of Dst.

Tables and Figures of the hourly values of equatorial Dst for the years 1961, 1962, and 1963 are presented in this report.

## ACKNOWLEDGMENTS

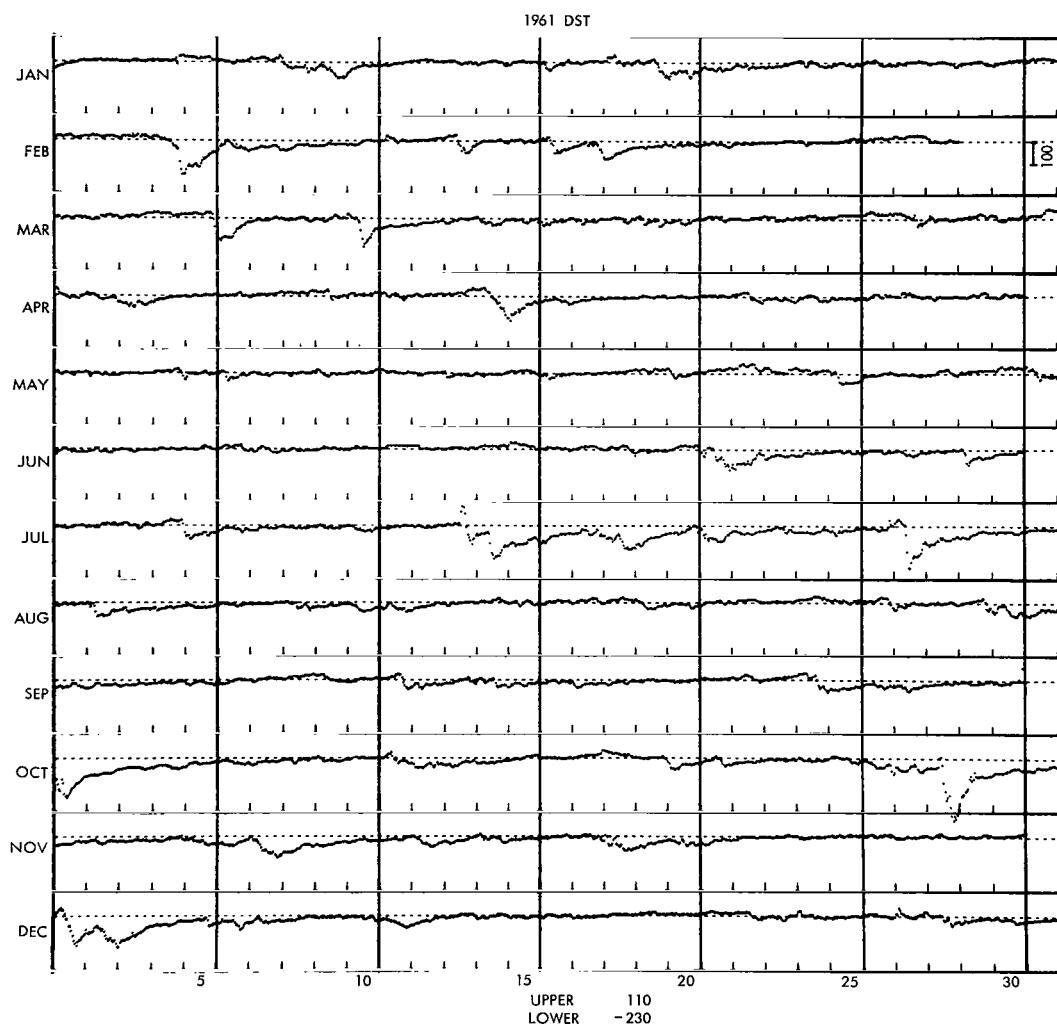
We wish to express our gratitude to the Magnetic Observatories and the Environmental Science Service Administration for making the data available and to the staff of the World Data Center-A for Geomagnetism whose assistance was invaluable.

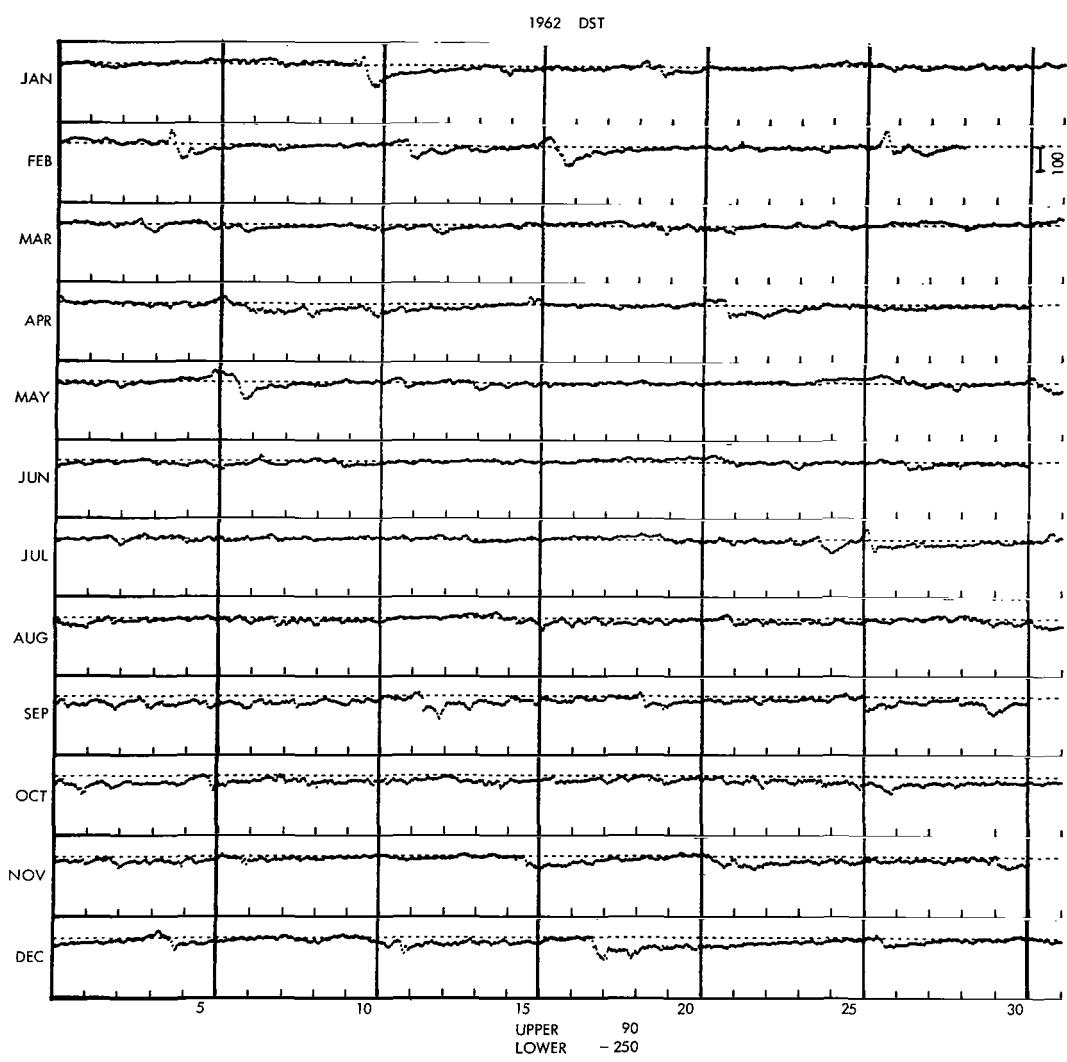
Goddard Space Flight Center  
National Aeronautics and Space Administration  
Greenbelt, Maryland, September 16, 1966  
188-36-01-01-51

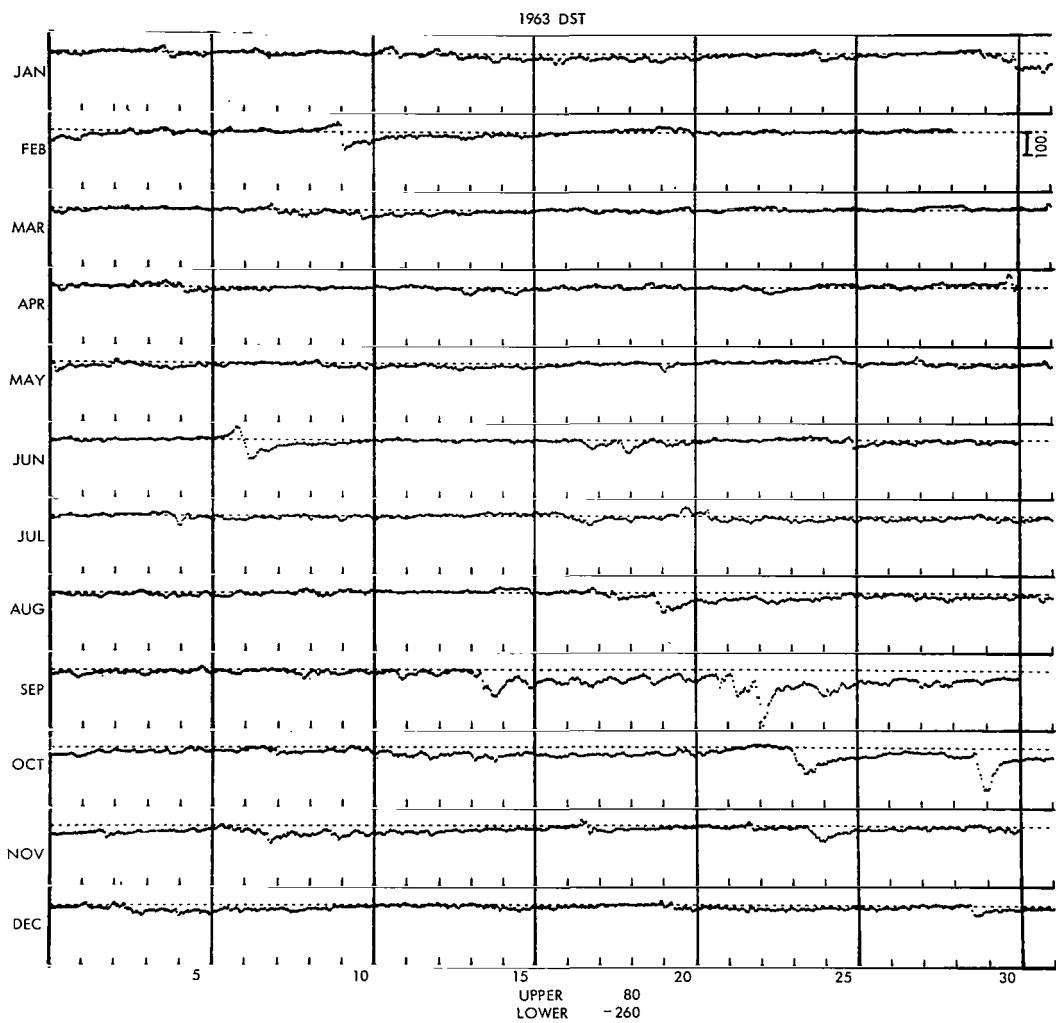
Table 2c  
Observed and Computed H for Honolulu.

1951-1960		Standard deviation = 3.1γ	
Epoch	Observed* H	Computed H	Difference
1951.5	28551γ	28551γ	0γ
1952.5	28527	28531	-4
1953.5	28512	28511	1
1954.5	28494	28491	3
1955.5	28475	28471	4
1956.5	28450	28452	-2
1957.5	28430	28433	-3
1958.5	28414	28414	0
1959.5	28393	28395	-2
1960.5	28380	28377	3
1960-1963		Standard deviation = 1.8γ	
Epoch	Observed* H	Computed H	Difference
1960.5	28107γ	28107γ	0γ
1961.5	28102	28101	1
1962.5	28087	28088	-1
1963.5	28070	28070	0

\*Mean of ten quiet days









## **Hourly Values of Equatorial Dst**

## HOURLY EQUATORIAL DST VALUES

JANUARY 1961

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-26	-25	-24	-22	-16	-16	-17	-15	-11	-7	-7	-8	-7	-5	-4	-5	-4	-1	3	5	4	6	3	4
2	4	2	3	4	6	9	9	7	6	6	11	4	3	4	6	6	3	4	7	4	5	6	4	5
3	5	4	1	1	3	2	1	1	3	4	7	8	7	7	5	5	1	1	2	1	3	7	10	8
4	8	9	9	9	6	4	5	8	5	6	6	7	4	5	4	6	10	18	-7	25	26	24	29	23
5	22	23	22	22	21	22	22	21	18	12	13	19	16	15	17	21	20	20	20	14	7	9	13	16
6	13	10	9	7	6	5	4	3	2	0	-4	-7	-5	1	6	4	3	3	6	5	5	6	6	11
7	20	15	14	14	14	16	17	17	19	22	20	15	17	12	10	8	9	12	17	18	17	28	23	17
8	0	-9	-14	-16	-20	-22	-26	-25	-22	-16	-24	-24	-24	-24	-23	-22	-14	-28	-42	-37	-28	-26	-30	-33
9	-26	-22	-16	-7	-15	-16	-14	-20	-30	-31	-23	-36	-37	-47	-52	-62	-68	-65	-63	-63	-62	-69	-61	-52
10	-45	-38	-31	-27	-25	-25	-21	-18	-19	-17	-14	-12	-10	-13	-12	-18	-18	-13	-10	-13	-15	-12	-9	-10
11	-12	-12	-9	-9	-11	-13	-13	-8	-7	-6	-6	-5	-3	0	1	-2	-3	0	4	5	3	5	7	9
12	8	9	7	10	10	11	12	14	11	14	17	13	10	13	13	10	3	4	6	5	2	4	9	6
13	3	3	6	8	7	6	8	8	4	8	-1	-4	-8	-5	0	0	-5	-2	2	5	-4	-6	-2	-1
14	-9	-9	-5	-2	-1	-1	1	3	4	5	6	7	7	10	7	3	0	3	3	-2	-8	-13	-14	-11
15	-10	-8	1	3	3	1	5	6	5	9	10	9	1	3	5	3	-2	2	4	4	2	-1	-9	-16
16	-6	5	3	-8	-21	-26	-30	-34	-30	-24	-18	-15	-11	-8	-6	-6	-8	-7	-1	3	13	8	-1	1
17	0	-2	1	3	1	-3	-4	-4	-2	2	2	4	3	8	8	6	6	7	9	8	2	2	5	4
18	7	10	20	23	20	22	23	34	23	1	3	6	0	-3	-13	-7	0	1	3	-5	-10	-5	0	5
19	7	12	5	-1	-2	-3	-2	2	5	7	6	12	16	13	5	-6	-18	-35	-35	-39	-49	-59	-52	-60
20	-67	-58	-45	-37	-39	-46	-45	-36	-29	-34	-37	-33	-33	-31	-44	-58	-65	-61	-46	-34	-41	-38	-37	-33
21	-28	-23	-18	-19	-24	-26	-27	-25	-22	-27	-29	-34	-31	-23	-16	-26	-35	-32	-25	-24	-26	-28	-25	-22
22	-18	-15	-10	-9	-10	-8	-13	-18	-15	-13	-11	-25	-24	-19	-13	-13	-23	-18	-19	-16	-17	-14	-13	-16
23	-21	-16	-13	-14	-18	-19	-17	-15	-13	-13	-15	-15	-14	-11	-9	-10	-10	-6	-1	-2	0	4	5	5
24	6	7	9	8	-1	-14	-16	-9	2	9	9	0	-2	-2	-5	-9	-12	-12	-13	-16	-18	-18	-13	-10
25	-18	-15	-9	-6	-7	-6	-1	-2	-2	1	-2	-9	-11	-10	-11	-12	-13	-12	-6	-5	-10	-8	-3	-4
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27	-12	-9	-2	-1	-3	-5	-5	-7	-0	2	-1	2	5	5	4	4	4	6	9	7	4	4	2	
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30	-12	-9	-5	-3	-2	-2	-0	0	0	4	4	6	7	9	9	8	9	11	13	14	13	12	10	11
31	11	9	10	12	17	20	14	12	15	17	15	17	19	19	16	15	15	16	15	14	13	12	10	10

## HOURLY EQUATORIAL DST VALUES

FEBRUARY 1961

	UNIT=GAMMAS																								G.M.T.
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	11	14	18	18	14	13	13	14	16	18	20	19	15	11	9	7	7	7	10	10	11	14	15	15	
2	13	14	18	20	19	18	16	16	15	11	9	10	12	13	16	16	16	16	18	17	13	12	9	8	
3	8	12	15	18	18	16	15	14	13	24	12	15	22	23	12	12	20	18	20	16	13	7	9	11	
4	15	16	16	15	10	7	6	5	6	-1	-3	-3	-6	-5	-18	-28	-27	-34	-41	-94	-128	-152	-151	-145	
5	-130	-114	-108	-116	-116	-114	-107	-105	-112	-115	-114	-102	-99	-83	-78	-76	-71	-62	-59	-54	-53	-51	-48	-44	
6	-41	-27	-20	-22	-19	-8	0	-2	-7	-14	-20	-28	-29	-20	-37	-37	-27	-31	-33	-39	-36	-43	-48	-45	
7	-40	-38	-38	-36	-36	-33	-30	-26	-25	-28	-29	-30	-32	-30	-28	-25	-21	-22	-22	-25	-31	-39	-42	-38	
8	-39	-42	-44	-41	-38	-35	-34	-31	-27	-22	-20	-18	-17	-17	-18	-24	-19	-15	-17	-23	-22	-21	-21	-22	
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20	-17	-14	-12	-21	-22	-21	-14	-10	-15	-11	-16	-18	-14	-15	-7	-15	-15	-9	-11	-13	-16	-19	-16	-18	
21	-18	-15	-14	-11	-9	-11	-13	-11	-7	-7	-4	-6	-13	-12	-8	-3	-10	-13	-15	-17	-24	-21	-22	-18	
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23	-7	-6	-2	-3	-4	-2	-3	-7	-5	-1	0	-1	0	1	3	2	4	5	4	4	4	4	1	1	
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27	24	24	29	18	17	15	15	16	20	23	24	24	24	23	26	27	25	23	24	25	26	23	20		
28	16	10	3	-2	-1	2	3	2	-1	1	-2	-3	-0	-1	1	4	8	7	3	3	-3	-2	-3	3	

## HOURLY EQUATORIAL DST VALUES

MARCH 1961

DAY	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	5	4	3	3	-8	-6	-3	-3	1	1	-1	-5	-9	-8	-1	4	5	4	2	-4	-0	2	-3	-7
2	-4	-7	-10	-9	-13	-6	-5	-6	-4	6	8	6	5	8	11	12	11	10	7	6	6	6	1	-5
3	-5	-2	0	3	6	8	8	8	10	7	6	7	7	5	7	10	12	15	15	18	19	20	19	21
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6	-90	-100	-89	-85	-82	-83	-86	-87	-86	-87	-82	-71	-63	-50	-47	-43	-39	-36	-33	-30	-24	-19	-20	-20
7	-17	-15	-12	-10	-9	-6	-7	-8	-8	-9	-9	-9	-9	-6	-6	-5	-3	1	1	1	-5	-2	-2	-4
8	-7	-8	-6	-9	-8	-6	-6	-6	-7	-5	-3	-2	1	5	5	1	-6	-10	-11	-13	-12	-8	-10	-7
9	-3	-3	-6	-5	-5	-9	-12	-12	-8	-4	-2	0	2	13	17	10	8	2	-2	-2	4	5	-1	15
10	19	10	4	1	-2	-2	4	-11	-20	-51	-90	-126	-111	-102	-93	-87	-82	-69	-55	-48	-43	-42	-41	-39
11	-44	-43	-41	-39	-37	-37	-33	-33	-31	-34	-35	-34	-36	-37	-35	-33	-31	-30	-25	-32	-31	-25	-25	-23
12	-28	-33	-29	-25	-24	-23	-21	-17	-17	-20	-19	-19	-18	-17	-17	-15	-16	-16	-15	-12	-11	-10	-10	-13
13	-17	-24	-21	-18	-15	-12	-8	-5	-11	-8	-4	-2	-1	-1	-2	-6	-6	-4	-2	0	0	4	3	7
14	9	-2	-8	-14	-16	-13	-21	-18	-15	-16	-17	-29	-27	-27	-25	-21	-23	-25	-19	-11	-8	-6	-6	-7
15	-6	-3	-2	-6	-8	-4	-5	-4	-2	-6	-13	-16	-19	-14	-17	-10	-7	-6	-5	-1	-0	-12	-13	-14
16	-13	-27	-31	-26	-20	-22	-26	-23	-14	-12	-9	-11	-12	-9	-4	-6	-12	-11	-10	-4	-2	-0	1	3
17	4	-1	-8	-6	-4	-4	-7	-21	-21	-13	-11	-11	-11	-10	-9	-11	-11	-12	-9	-4	-3	-2	1	-0
18	-2	-3	-3	-1	-0	2	5	6	6	5	6	4	3	2	-9	-11	-15	-18	-16	-11	-3	1	-3	-0
19	7	7	11	11	1	-1	-22	-21	-16	-15	-9	-10	-5	3	-8	-1	-5	-32	-30	-25	-21	-16	-10	-8
20	-14	-13	-13	-11	-8	-6	-6	-5	-1	-12	-18	-20	-22	-21	-19	-16	-13	-14	-6	-4	-0	-1	1	5
21	2	-3	2	4	9	9	11	13	12	9	8	10	10	9	8	9	10	-4	-7	-10	-0	-2	1	3
22	4	5	1	1	1	1	2	-0	-1	-3	-1	-2	-2	1	6	7	7	7	7	9	9	10	11	15
23	16	13	12	12	12	10	13	13	-4	-4	-4	-1	-1	-5	-2	0	7	6	4	4	3	4	8	10
24	7	8	10	13	10	8	12	14	17	19	17	15	17	18	16	13	9	9	9	10	10	8	8	12
25	10	9	11	12	12	12	14	18	21	21	20	19	18	20	18	21	21	22	21	22	21	20	21	20
26	18	19	21	26	28	30	36	34	33	27	23	22	27	22	21	24	21	20	22	21	23	27	18	20
27	27	28	26	25	28	23	19	20	15	11	10	5	4	7	20	-2	-29	-23	-20	-27	-19	-14	-8	
28	-6	1	14	10	6	-1	-10	-7	1	4	2	-1	2	3	1	1	-5	-5	-2	-4	-3	-1	2	2
29	1	3	5	7	8	9	9	11	13	13	9	13	12	14	20	23	22	21	17	8	8	12	17	18
30	16	17	17	6	-5	-6	-7	-9	-8	-3	-4	1	6	4	7	4	4	1	1	4	8	8	13	14
31	5	5	10	13	14	14	16	17	15	14	13	17	18	29	28	43	40	45	40	43	39	36	36	39

## HOURLY EQUATORIAL DST VALUES

APRIL 1961

	UNIT=GAMMAS																				G.M.T.				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	32	22	13	6	1	4	-1	-7	-7	-12	-13	-7	-8	-9	-8	-9	-13	-15	-7	-1	-2	1	6	13	
2	7	2	5	7	4	-1	-6	-12	-13	-19	-20	-17	-16	-16	-13	-12	-12	-11	-12	-7	-13	-28	-30	-28	
3	-30	-34	-36	-33	-42	-49	-42	-34	-48	-53	-45	-31	-26	-28	-33	-34	-39	-43	-42	-40	-33	-30	-28	-32	
4	-26	-20	-18	-19	-15	-16	-18	-15	-13	-12	-11	-9	-7	-9	-7	-7	-7	-6	-6	-5	-3	-1	-0	-0	
5	-4	-7	-7	-5	0	2	2	1	-1	-1	-2	-1	2	4	5	3	2	4	4	4	5	6	5	5	
6	1	0	-0	2	2	1	0	2	2	2	2	4	6	7	12	15	10	3	-2	4	4	0	-4	-8	
7	-2	5	0	2	5	5	5	6	7	6	6	4	6	6	6	5	8	9	10	13	15	17	18	15	
8	12	12	14	16	15	15	14	11	14	13	13	13	15	15	14	11	11	13	13	19	23	24	21	22	
9	19	16	15	18	17	15	21	25	29	18	-5	-14	-18	-3	-6	-8	-9	-6	-3	-3	1	1	-1	-12	
10	7	11	9	9	9	2	1	7	7	4	7	10	8	4	3	7	9	8	12	14	15	16	13	12	
11	12	13	16	13	1	-2	-4	4	6	7	9	9	7	-3	-5	-8	-13	-19	-9	-0	3	1	-1	-3	
12	1	6	9	8	6	4	0	-2	3	5	6	6	8	9	4	1	5	8	11	12	12	10	11	7	
13	5	7	10	9	7	6	7	11	13	14	14	14	15	11	8	19	23	26	27	30	35	33	30	29	
14	26	26	31	33	35	37	27	19	21	14	0	-2	-9	-16	-22	-31	-26	-50	-52	-52	-65	-84	-97	-94	
15	-107	-77	-83	-77	-71	-70	-58	-71	-60	-54	-52	-50	-34	-35	-33	-34	-35	-31	-24	-24	-29	-30	-25	-24	
16	-24	-23	-17	-16	-16	-17	-13	-13	-14	-13	-11	-10	-11	-13	-14	-23	-22	-18	-20	-22	-29	-37	-33	-31	
17	-26	-24	-23	-22	-22	-19	-18	-16	-16	-16	-16	-17	-14	-15	-13	-12	-11	-10	-10	-11	-12	-11	-11	-10	-11
18	-10	-9	-7	-5	-5	-5	-7	-7	-8	-6	-6	-7	-7	-7	-7	-9	-8	-7	-6	-5	-5	-7	-7	-7	
19	-7	-5	-3	-0	3	5	4	4	3	-1	-1	-0	0	-5	-1	2	3	2	-1	6	6	6	1	-6	
20	-2	-1	-0	0	-2	-0	2	2	4	5	5	2	1	0	-0	-3	-3	-3	-2	0	3	4	0	2	
21	5	8	8	7	5	3	5	6	5	5	8	7	3	-0	5	5	6	5	4	2	3	0	2	4	
22	7	10	12	11	11	12	15	17	20	21	21	21	17	2	-10	-10	-8	-9	-13	-18	-18	-25	-26	-16	
23	-11	-9	-7	-6	-9	-8	-7	-5	-3	-7	-12	-10	-14	-13	-9	-8	-7	-9	-12	-14	-18	-20	-21	-23	
24	-16	-11	-5	-5	-4	-2	2	4	5	5	4	5	4	2	-2	-6	-13	-17	-18	-18	-15	-14	-19	-19	
25	-13	-8	-1	-4	-8	-12	-10	-8	-8	-8	-6	-5	-6	-7	-6	-6	-5	-7	-11	-13	-12	-8	-7	-9	
26	-6	-6	-8	-10	-10	-6	-3	2	8	13	12	12	9	5	-1	-3	-0	10	5	4	6	5	2	2	
27	4	4	4	4	-3	13	20	18	14	12	12	18	13	9	6	7	4	3	1	-2	-6	-5	-1	-1	
28	1	-2	3	-0	-11	-11	-13	-8	-2	1	0	-9	-2	-2	-3	-3	-1	-0	-3	-0	3	3	1	-1	
29	0	0	-1	-2	-3	-4	-2	2	4	7	11	7	4	3	3	9	15	17	18	14	9	0	-2	-3	
30	-2	-2	-1	-4	-6	-6	-1	7	9	9	10	8	4	2	5	4	10	6	8	11	6	3	6	2	

## HOURLY EQUATORIAL DST VALUES

MAY 1961

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	3	6	-1	-6	-10	-8	-1	1	-0	-3	-5	-4	-9	-13	-6	-2	1	-3	-3	-1	0	3	4	2
2	-11	-19	-12	-7	-4	-3	-4	-4	-7	-12	-9	-10	-7	-7	-11	-13	-12	-10	-10	-10	-11	-11	-9	-9
3	-8	-6	-4	-4	-4	-5	-4	-1	-1	0	-0	-4	-5	-7	-7	-7	-3	-1	-2	-1	-0	0	-0	0
4	4	7	8	7	5	4	5	8	8	7	9	10	5	6	9	14	17	19	14	5	-3	-16	-27	-32
5	-18	-6	-5	-0	-3	-8	-8	-6	-7	-5	-3	-0	3	5	5	-0	-9	-10	-0	-5	-5	-2	-3	-7
6	2	7	6	5	3	-17	-37	-33	-25	-20	-27	-25	-25	-24	-18	-12	-11	-12	-12	-12	-14	-11	-7	-4
7	-1	2	4	-1	-8	-7	-8	-11	-11	-10	-10	-10	-16	-14	-11	-6	-3	-4	-1	-1	-2	-2	-3	-5
8	-3	-2	-1	-8	-13	-13	-7	-1	0	-5	-2	-1	1	1	1	0	0	-2	-3	-1	0	5	5	6
9	11	13	10	3	-1	-6	-11	-13	-10	-17	-11	-5	-3	-3	-8	-10	-7	-6	-8	-7	-6	-8	-8	-6
10	-1	1	2	1	-0	1	6	8	6	-2	-2	-3	-4	-3	1	3	5	5	6	10	14	17	16	12
11	15	16	10	7	8	4	5	7	7	8	6	3	2	0	4	-2	-3	-1	-3	2	5	2	3	4
12	-1	1	-0	-10	-10	-8	-10	-7	-4	-4	-2	1	1	2	1	0	1	1	1	1	3	2	4	7
13	-2	-18	-20	-18	-16	-14	-10	-6	-6	-6	-7	-12	-7	-3	-7	-10	-11	-11	-10	-9	-10	-8	-3	1
14	0	0	-5	-11	-14	-11	-7	-5	-2	-2	-5	-8	-5	-4	-7	-8	-7	-5	-5	-3	-1	1	5	7
15	8	11	10	7	6	8	8	9	9	10	11	10	13	13	10	9	10	8	6	3	-2	-5	-5	-7
16	-11	-11	-4	-1	-12	-5	-22	-23	-19	-20	-19	-11	-4	-4	-10	-11	-9	-3	-5	-6	-3	-6	-1	0
17	1	1	-0	-3	-4	-3	-3	-2	-0	4	4	4	1	1	-4	-3	-3	-3	-1	1	3	3	4	5
18	6	5	3	1	2	4	5	5	5	5	5	5	7	8	7	8	9	10	11	13	14	15	16	19
19	18	15	11	14	18	18	18	17	11	8	10	8	11	21	22	21	19	17	16	19	18	14	18	24
20	22	13	12	-0	-12	-17	-17	-11	-8	-7	-10	-9	-10	-12	-10	-6	-5	-0	3	2	5	5	5	6
21	7	6	8	7	8	11	13	15	16	16	14	15	19	19	18	20	16	14	16	18	20	23	26	23
22	18	20	22	23	23	35	37	41	44	37	33	30	35	41	41	43	40	27	22	17	15	12	13	19
23	26	27	23	28	19	7	11	11	9	5	8	4	7	3	4	2	4	1	20	18	19	22	25	26
24	23	19	16	13	10	15	18	20	17	16	0	2	5	8	10	10	9	11	14	14	15	15	17	17
25	11	-0	2	8	9	2	-16	-37	-41	-46	-46	-40	-37	-39	-40	-41	-42	-41	-38	-38	-38	-35	-32	-28
26	-21	-13	-11	-12	-11	-8	-8	-9	-6	-7	-9	-8	-8	-6	-4	-1	2	3	3	4	6	5	3	2
27	-0	-1	-5	-6	-3	-3	-3	-1	-2	-4	-6	-5	-3	-3	-5	-6	-7	-8	-9	-9	-10	-7	-8	-6
28	-6	-6	-7	-7	-4	-1	-0	5	10	13	12	13	17	14	18	19	11	5	1	-3	-7	-8	-12	-0
29	5	7	5	1	-1	6	10	11	12	11	11	11	10	11	13	13	13	12	14	16	16	14	16	15
30	15	13	10	13	22	27	31	31	23	20	23	29	24	32	30	24	25	23	28	29	27	23	22	31
31	31	30	13	15	19	23	16	9	7	-12	-29	-22	-12	-7	-11	-9	-10	-12	-15	-14	-13	-11	-12	-17

## HOURLY EQUATORIAL DST VALUES

JUNE 1961

	UNIT=GAMMAS																						G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-19	-10	-7	-6	-3	4	6	5	0	-1	-2	-3	-12	-6	-4	-9	-13	-13	-9	-9	-8	-11	-10	-9
2	-7	-7	-6	-5	-1	6	6	4	-8	-9	-8	-8	-5	-6	-11	-14	-9	-14	-8	-3	-3	-2	-2	0
3	1	-0	0	3	3	-2	-6	-3	-7	-10	-9	-5	-1	-1	-2	-4	-4	-3	-2	-2	-4	-3	-2	-2
4	-1	-1	-2	-0	4	4	7	4	0	1	0	2	4	7	7	2	-2	-2	-3	-3	2	5	7	5
5	1	0	2	-0	-0	0	-2	-1	1	1	4	10	16	17	13	10	9	10	6	1	1	3	7	7
6	5	6	11	14	21	21	20	15	10	11	16	19	20	21	19	19	22	11	-1	-4	-2	-7	-4	1
7	-2	-5	-9	-7	-1	6	12	16	13	9	0	2	5	3	-8	-9	-10	-10	-14	-13	-13	-8	0	-2
8	-5	-7	-5	-4	-1	3	5	4	1	-2	-5	-5	-1	-2	-6	-4	-3	-3	-3	-2	-4	-1	-2	-2
9	-2	-0	1	7	12	13	11	10	7	8	8	7	9	9	5	2	2	3	4	2	-2	2	2	1
10	-1	1	4	8	10	14	15	11	8	7	9	11	11	12	7	7	7	7	6	4	5	6	8	9
11	7	6	7	11	16	21	21	20	19	19	19	18	18	18	19	20	19	19	17	16	17	18	19	20
12	20	21	20	20	16	5	1	4	5	8	7	5	2	1	-0	1	5	7	6	4	4	3	3	2
13	2	4	4	5	9	12	11	9	9	9	10	10	9	7	6	5	3	5	10	11	11	11	7	6
14	11	13	15	17	21	24	21	17	14	17	17	18	19	17	16	16	18	19	21	23	21	19	16	23
15	34	32	32	32	34	32	29	28	24	23	26	25	22	20	18	16	18	21	14	6	2	5	9	6
16	7	7	5	2	9	14	12	14	10	10	12	12	14	12	10	7	6	8	10	7	4	-1	-2	0
17	4	6	8	6	11	12	14	14	14	17	17	14	15	19	19	18	17	16	14	9	5	5	5	1
18	-0	-0	3	9	14	16	16	12	8	11	10	10	14	18	22	20	21	20	11	2	-0	-5	-12	-22
19	-12	-7	-4	-3	-1	-0	2	0	-7	-9	-5	-4	-1	-1	1	-2	-1	1	1	-3	-2	-4	-3	-1
20	2	2	1	4	8	11	13	14	21	23	17	21	25	22	21	17	21	21	17	14	24	25	18	4
21	-9	-7	-24	-27	-12	9	10	13	4	12	1	-26	-41	-44	-37	-35	-30	-41	-57	-70	-63	-70	-86	-76
22	-64	-80	-82	-60	-58	-59	-59	-56	-53	-62	-58	-47	-56	-61	-53	-40	-38	-33	-21	-9	-9	-14	-19	-21
23	-36	-41	-34	-31	-27	-25	-24	-23	-21	-21	-21	-21	-21	-25	-25	-27	-25	-26	-24	-21	-18	-19	-22	-24
24	-22	-20	-24	-22	-19	-13	-12	-10	-10	-12	-13	-14	-14	-12	-10	-10	-10	-11	-13	-11	-8	-6	-6	-7
25	-8	-8	-6	-2	-1	-1	0	-1	-3	-7	-10	-6	-4	-3	-3	-4	-9	-10	-12	-11	-6	-7	-13	-13
26	-13	-11	-8	-5	-2	0	2	3	1	1	1	1	1	1	0	-6	-12	-13	-8	-5	-5	-6	-5	-3
27	-3	-1	2	2	-3	-4	-8	-10	-15	-20	-15	-14	-19	-25	-24	-21	-19	-14	-10	-8	-7	-7	-8	-9
28	-8	-7	-4	-1	-2	-1	-1	2	0	-2	-4	-3	-4	-5	-2	1	2	3	3	5	5	3	2	3
29	7	9	7	-8	-14	-52	-63	-49	-41	-36	-34	-32	-32	-29	-25	-30	-34	-35	-32	-30	-30	-29	-27	
30	-25	-19	-16	-15	-16	-12	-10	-9	-9	-10	-10	-10	-10	-13	-11	-10	-10	-10	-6	-4	-2	-1	2	-0

## HOURLY EQUATORIAL DST VALUES

JULY 1961

	UNIT=GAMMAS																					G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-1	-1	-2	-0	-3	-5	-3	-6	-13	-9	-9	-9	-6	-3	-0	3	1	0	3	5	5	2	-4	-5	
2	-4	-4	-1	-0	-3	-5	-5	-8	-4	5	9	9	10	10	16	12	5	10	13	16	8	1	4	8	
3	11	12	15	15	14	12	3	2	3	6	7	-2	-10	-12	-8	-2	6	10	14	14	11	4	2	1	
4	1	5	7	6	6	7	12	19	19	23	24	24	30	26	29	23	22	20	23	27	29	8	-27	-44	
5	-43	-43	-55	-58	-51	-43	-41	-40	-39	-38	-36	-37	-30	-27	-28	-42	-41	-33	-30	-29	-27	-27	-23	-24	
6	-18	-14	-15	-6	-7	-6	-5	-5	-5	-6	-9	-11	-14	-10	-10	-14	-26	-28	-19	-13	-13	-16	-18	-18	
7	-20	-21	-20	-20	-18	-12	-8	-8	-7	-7	-8	-9	-11	-12	-8	-12	-12	-12	-12	-8	-6	-2	-1	-1	
8	-3	-5	-6	-7	-9	-6	-5	-6	-12	-11	-9	-8	-11	-12	-9	-9	-12	-8	-5	-3	-2	-1	-4	-7	
9	-3	-0	4	2	0	-7	-9	-9	-10	-4	-6	-8	-10	-10	-9	-9	-13	-10	-4	-1	-0	-1	1	2	
10	2	3	1	-4	-11	-11	-16	-15	-12	-18	-20	-22	-22	-21	-19	-17	-23	-22	-15	-10	-9	-13	-16	-12	
11	-9	-8	-5	-7	-10	-11	-6	-3	-1	-1	-2	2	1	-3	-2	-0	1	4	4	3	1	1	0		
12	-1	-1	3	4	2	1	-1	-3	-9	-7	-6	-4	-3	-5	-3	-3	-1	2	5	5	5	2	1	2	
13	5	8	9	7	6	7	11	13	12	10	15	15	66	90	88	55	-35	-48	-64	-79	-59	-52	-40	-33	
14	-42	-38	-34	-34	-31	-31	-27	-26	-34	-77	-118	-128	-142	-135	-135	-132	-131	-119	-105	-94	-82	-86	-86	-82	
15	-77	-75	-71	-75	-86	-83	-80	-78	-79	-79	-80	-76	-76	-72	-57	-57	-56	-54	-50	-48	-54	-63	-69	-73	
16	-76	-62	-66	-73	-67	-59	-53	-46	-46	-43	-42	-39	-39	-39	-34	-37	-34	-32	-35	-32	-30	-31	-30	-31	
17	-32	-32	-29	-32	-28	-27	-20	-11	-14	-14	-14	-21	-31	-36	-37	-31	-28	-25	-13	-17	-41	-31	-39	-42	
18	-41	-54	-54	-48	-49	-54	-66	-57	-48	-43	-31	-42	-52	-66	-82	-97	-96	-94	-99	-99	-101	-98	-94	-97	
19	-80	-76	-81	-86	-85	-75	-66	-61	-58	-53	-51	-49	-50	-48	-46	-46	-46	-46	-42	-37	-35	-33	-32	-34	
20	-30	-29	-27	-22	-29	-26	-25	-32	-33	-27	-21	-22	-24	-21	-11	-10	-7	-5	0	4	4	-3	-22	-12	
21	-9	-13	-35	-48	-33	-52	-61	-51	-51	-55	-55	-55	-60	-65	-66	-68	-68	-63	-54	-44	-35	-35	-29	-26	
22	-20	-19	-20	-19	-22	-23	-32	-29	-32	-33	-28	-30	-30	-31	-34	-32	-29	-24	-22	-19	-19	-19	-19	-20	
23	-18	-14	-11	-12	-14	-13	-9	-5	0	2	-3	-5	-1	-6	-13	-25	-27	-18	-13	-13	-20	-22	-23	-25	
24	-25	-25	-23	-24	-24	-25	-23	-20	-24	-29	-25	-28	-29	-25	-22	-20	-19	-18	-12	-9	-11	-12	-11	-16	
25	-19	-19	-16	-25	-34	-35	-23	-17	-24	-20	-15	-12	-16	-15	-15	-16	-16	-14	-12	-6	-5	-9	-5	-2	
26	0	-3	-3	-5	-6	-5	-6	-5	-4	-4	-6	-12	-15	-14	-11	-9	-10	-10	-2	33	14	7	6		
27	18	29	31	37	27	17	15	10	-33	-110	-183	-180	-157	-135	-124	-131	-131	-127	-120	-114	-96	-69	-64	-71	
28	-77	-82	-76	-75	-75	-74	-66	-59	-61	-46	-53	-47	-52	-56	-59	-58	-60	-57	-50	-49	-50	-42	-43	-46	
29	-49	-45	-43	-47	-44	-48	-50	-44	-38	-32	-31	-31	-30	-22	-19	-19	-18	-17	-19	-21	-25	-24	-23	-22	
30	-18	-20	-30	-25	-21	-20	-19	-21	-19	-23	-20	-19	-19	-20	-21	-23	-27	-27	-28	-27	-20	-19	-17	-16	
31	-18	-15	-13	-12	-13	-10	-10	-10	-8	-8	-11	-11	-9	-10	-8	-7	-10	-10	-10	-13	-12	-11	-11	-8	

## HOURLY EQUATORIAL DST VALUES

AUGUST 1961

UNIT=GAMMAS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	G.M.T.	23	24
DAY																									
1	-9	-9	-11	-8	-6	-3	0	0	-4	-7	-5	-3	-5	-7	-7	-5	-1	-2	0	2	-1	-1	2	6	
2	-4	-15	-2	3	-11	-39	-58	-56	-56	-52	-49	-57	-54	-55	-54	-51	-42	-33	-29	-36	-34	-33	-31	-30	
3	-29	-27	-20	-22	-31	-42	-39	-33	-35	-34	-30	-27	-27	-28	-26	-26	-26	-25	-26	-23	-24	-27	-23	-21	
4	-25	-21	-32	-29	-27	-26	-25	-25	-23	-17	-18	-17	-17	-20	-23	-19	-15	-14	-14	-14	-15	-11	-12	-12	
5	-10	-9	-9	-13	-13	-14	-18	-21	-16	-19	-19	-20	-19	-17	-18	-16	-16	-15	-14	-11	-8	-7	-10		
6	-7	-2	2	-0	-3	-4	-5	-6	-7	-5	-7	-9	-10	-14	-10	-9	-10	-9	-7	-4	-3	-2	-5	-4	
7	-6	-5	-3	-2	-3	-2	-2	-1	-2	-1	-2	-2	-1	-3	-5	-4	-0	1	2	-0	3	4	1	1	
8	3	4	4	1	-3	-5	-5	0	2	-16	-25	-21	-18	-14	-6	-5	-9	-17	-26	-32	-22	-17	-18	-16	
9	-14	-13	-15	-15	-17	-17	-15	-14	-12	-9	-8	-7	-10	-12	-10	-10	-9	-8	-5	-3	-6	-1	-3	-4	
10	-4	-3	-7	-11	-11	-12	-21	-29	-32	-35	-37	-37	-38	-35	-32	-33	-32	-28	-25	-22	-20	-21	-22	-20	
11	-21	-27	-25	-18	-10	-3	2	2	-10	-15	-21	-26	-28	-25	-26	-27	-24	-25	-36	-39	-32	-31	-33	-31	
12	-26	-20	-20	-20	-18	-17	-17	-15	-15	-14	-13	-11	-10	-9	-8	-6	-4	-0	2	2	-2	-1	-3	-3	
13	-4	-10	-11	-5	-2	-0	2	-2	-2	2	1	1	1	2	4	5	5	4	5	5	5	3	2	2	
14	3	7	9	9	11	10	7	7	4	6	10	12	13	16	17	22	22	8	12	8	6	4	1	-2	
15	0	2	4	5	8	8	-1	-12	-12	-3	0	5	10	12	11	9	3	-1	-8	-8	-5	-6	-9	-9	
16	-5	-1	-3	-2	5	7	8	6	7	9	11	11	12	14	13	11	9	8	8	10	12	9	4	-1	
17	0	1	6	10	11	12	14	16	13	10	9	13	16	19	22	20	22	24	18	8	4	0	-1	-2	
18	-0	7	9	9	12	15	15	12	13	12	14	17	22	28	24	20	19	17	14	15	16	15	16	17	
19	14	9	5	5	3	-5	-12	-21	-26	-25	-22	-24	-24	-23	-18	-15	-12	-10	-11	-10	-9	-11	-10		
20	-9	-8	-5	-3	1	1	-0	-1	-2	-2	0	-2	-5	-6	-3	-2	-11	-22	-21	-17	-12	-10	-10	-11	
21	-12	-9	-5	1	4	6	6	7	5	3	4	7	10	10	12	10	6	1	-1	2	9	10	9	7	
22	3	3	3	8	12	12	13	15	13	14	16	18	20	20	19	19	17	16	12	11	10	8	7	5	
23	6	5	5	4	7	9	9	8	10	12	10	7	8	6	8	8	9	8	10	9	6	8	11	12	
24	13	17	18	18	18	17	18	19	21	22	22	25	29	31	33	33	32	25	19	26	27	19	17	20	
25	13	10	12	19	19	14	11	13	10	11	17	9	8	6	2	2	6	8	13	13	14	17	10	7	
26	5	12	12	8	9	16	16	14	11	11	15	20	22	26	29	28	26	25	25	24	11	-5	-14	-19	
27	-28	-24	-12	-7	-6	-7	-12	-14	-10	-4	-1	-1	4	6	9	5	3	2	3	2	3	3	-2	-4	
28	-3	1	1	4	4	3	2	8	7	2	3	3	4	4	6	7	9	10	8	6	1	-3	-2	-1	
29	0	2	4	6	7	8	11	10	9	12	16	16	17	18	19	20	22	27	9	-20	-28	-19	-14	-27	
30	-33	-40	-32	-16	-8	-8	-6	-2	-6	-8	-19	-30	-36	-45	-48	-49	-56	-54	-46	-37	-35	-38	-44	-51	
31	-49	-50	-54	-54	-47	-47	-46	-42	-38	-34	-29	-22	-19	-23	-31	-24	-20	-24	-27	-25	-27	-27	-27	-22	

## HOURLY EQUATORIAL DST VALUES

SEPTEMBER 1961

	UNIT=GAMMAS																			G.M.T.				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-27	-29	-25	-21	-24	-33	-28	-26	-23	-27	-25	-20	-13	-11	-11	-15	-24	-21	-27	-26	-31	-35	-35	-35
2	-32	-30	-27	-24	-19	-13	-13	-10	-12	-20	-21	-21	-18	-19	-19	-17	-20	-19	-16	-13	-15	-19	-20	-23
3	-24	-22	-20	-17	-18	-22	-20	-19	-18	-16	-19	-18	-11	-9	-10	-12	-13	-15	-15	-16	-14	-15	-14	-13
4	-12	-13	-12	-9	-9	-11	-8	-4	-6	-7	-10	-8	-10	-11	-10	-8	-6	-3	-2	-2	-1	-3	-5	-10
5	-16	-18	-21	-19	-13	-11	-8	-7	-5	-5	-5	-5	-8	-9	-11	-11	-13	-15	-13	-18	-20	-18	-14	-13
6	-12	-13	-16	-18	-16	-13	-10	-7	-5	-3	-2	-1	0	4	6	5	3	2	3	1	2	2	-0	-1
7	-4	-7	-6	-2	1	3	6	7	7	7	8	10	12	13	11	9	9	9	10	9	7	8	6	4
8	5	7	10	12	15	12	12	17	16	16	13	14	16	16	17	22	24	24	21	22	25	25	26	24
9	23	21	24	28	27	22	15	13	11	5	1	-0	2	0	0	-4	-5	-5	-5	-4	-3	-3	-6	-4
10	-8	-8	-4	-2	-2	-3	-1	3	5	8	6	11	10	7	6	5	4	3	8	11	12	11	8	10
11	7	8	11	10	10	8	12	16	17	15	20	27	29	27	26	15	-7	-22	-30	-34	-37	-34	-30	-30
12	-23	-11	-12	-18	-28	-31	-36	-27	-21	-18	-15	-21	-21	-20	-16	-13	-14	-19	-20	-17	-19	-16	-17	-10
13	-11	-11	-10	-11	-13	-12	-6	-3	-2	-2	-1	1	2	4	5	3	15	10	2	-5	-5	-11	-17	-5
14	7	10	8	7	-3	-11	-8	-3	-0	5	2	8	3	-14	-26	-28	-26	-26	-19	-20	-22	-20	-28	-28
15	-23	-18	-19	-13	-11	-11	-14	-13	-17	-22	-26	-24	-24	-18	-14	-14	-15	-14	-15	-11	-9	-11	-12	-12
16	-11	-13	-13	-13	-10	-9	-4	-2	2	1	-1	-2	-8	-10	-6	-4	-4	-2	-4	-4	-8	-14	-10	-5
17	-10	-22	-29	-34	-31	-28	-25	-22	-18	-16	-16	-18	-16	-14	-14	-16	-17	-17	-16	-13	-10	-10	-11	-11
18	-14	-16	-19	-19	-18	-14	-8	-7	-8	-8	-6	-5	-2	-4	-6	-12	-16	-12	-6	-4	-4	-4	-3	-2
19	-2	-2	-4	-8	-6	-4	-0	2	4	5	2	5	3	0	-2	-3	-3	-2	-1	1	0	-0	0	
20	-1	-2	-4	-5	-6	-6	-4	-5	-7	-7	-4	-2	-3	-5	-5	-8	-1	-1	2	5	3	-1	2	
21	9	10	11	12	11	10	6	5	5	7	8	5	4	5	6	8	8	6	10	11	11	11	12	
22	12	12	11	10	11	11	14	18	21	25	28	24	21	18	18	10	4	6	5	0	-6	-1	2	5
23	6	7	8	7	7	8	9	10	13	14	13	12	11	13	16	16	15	17	18	17	17	20	22	23
24	26	29	29	29	31	33	34	27	15	13	6	18	24	25	4	-21	-35	-31	-24	-21	-33	-42	-49	-43
25	-35	-32	-37	-37	-38	-36	-41	-33	-35	-31	-29	-33	-34	-33	-32	-30	-27	-27	-24	-22	-23	-25	-23	-22
26	-21	-17	-12	-14	-12	-12	-13	-11	-9	-13	-16	-24	-22	-18	-21	-26	-32	-28	-24	-23	-17	-20	-23	-18
27	-24	-22	-18	-19	-18	-23	-28	-24	-32	-40	-45	-40	-34	-30	-29	-28	-30	-30	-26	-24	-20	-18	-16	-18
28	-19	-18	-17	-17	-15	-14	-12	-13	-12	-13	-13	-9	-7	-6	-6	-8	-11	-12	-12	-9	-3	-4	-6	-8
29	-5	-2	-5	-5	-3	-3	-8	-11	-11	-10	-10	-10	-11	-11	-8	-9	-9	-6	-4	0	-2	-1	3	0
30	-6	-6	-5	-9	-10	-13	-14	-13	-12	-9	-9	-9	-10	-3	-3	1	-9	-1	1	8	-1	62	0	-39

## HOURLY EQUATORIAL DST VALUES

OCTOBER 1961

	UNIT=GAMMAS																				G.M.T.			
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-91	-110	-131	-139	-89	-107	-151	-160	-169	-163	-148	-136	-128	-122	-113	-107	-104	-101	-94	-87	-80	-77	-78	-75
2	-73	-74	-72	-71	-67	-70	-71	-71	-69	-67	-62	-62	-62	-65	-65	-65	-64	-63	-59	-53	-50	-47	-48	-48
3	-48	-44	-42	-40	-39	-38	-38	-38	-37	-37	-36	-37	-37	-39	-41	-43	-45	-45	-45	-42	-40	-40	-39	-40
4	-39	-35	-33	-30	-31	-30	-29	-28	-28	-29	-32	-33	-38	-41	-44	-43	-42	-47	-47	-41	-36	-38	-37	-37
5	-33	-25	-22	-21	-19	-18	-17	-18	-20	-23	-23	-21	-20	-19	-20	-21	-22	-22	-18	-16	-15	-14	-14	-18
6	-17	-13	-10	-6	-7	-7	-8	-12	-13	-14	-18	-21	-19	-18	-20	-20	-20	-25	-27	-25	-21	-18	-20	-23
7	-28	-28	-26	-26	-18	-15	-17	-17	-15	-11	-10	-13	-18	-17	-12	-13	-13	-15	-15	-13	-11	-10	-9	-9
8	-4	-2	-3	-3	-3	-8	-12	-19	-19	-15	-10	-9	-8	-5	-0	-2	-4	-7	-6	-2	2	3	1	1
9	4	7	6	1	-9	-14	-11	-10	-9	-8	-7	-6	-8	-8	-9	-11	-11	-12	-13	-10	-6	-3	-4	-5
10	-5	-3	-0	1	3	4	3	1	2	4	4	3	2	0	1	0	2	2	0	2	3	1	-0	-1
11	-0	1	3	8	13	18	17	24	8	-3	0	-7	-19	-18	-13	-9	-9	-9	-11	-12	-22	-22	-19	-22
12	-27	-36	-36	-41	-39	-39	-39	-40	-35	-29	-25	-22	-20	-23	-34	-37	-31	-18	-23	-27	-22	-25	-24	-28
13	-30	-30	-27	-27	-32	-37	-32	-30	-32	-30	-25	-22	-16	-15	-13	-12	-14	-16	-15	-12	-8	-10	-16	-21
14	-20	-20	-19	-16	-15	-17	-20	-20	-19	-15	-16	-18	-19	-16	-12	-11	-11	-11	-11	-9	-7	-7	-8	-9
15	-6	-4	-3	-3	-1	-0	-1	-2	-3	1	3	6	8	9	8	9	9	10	12	14	12	12	7	3
16	1	4	4	3	5	6	6	4	2	3	4	1	2	3	1	0	2	2	0	1	4	6	4	2
17	2	4	6	6	7	8	9	10	11	12	13	14	15	15	14	14	14	14	14	16	19	21	33	35
18	32	30	28	26	24	20	19	20	20	21	19	18	15	15	13	16	15	14	16	10	7	6	4	4
19	6	5	3	0	0	0	-1	-1	-1	1	3	3	3	3	3	5	6	6	6	7	5	2	-0	-11
20	-20	-36	-40	-43	-45	-48	-44	-45	-38	-29	-26	-27	-27	-26	-27	-27	-27	-28	-26	-24	-21	-21	-21	-20
21	-19	-17	-14	-13	-9	-7	-8	-9	-7	-5	5	9	-0	2	0	-10	-19	-28	-32	-31	-24	-26	-30	-23
22	-20	-19	-18	-19	-18	-18	-17	-16	-16	-14	-14	-11	-11	-11	-14	-17	-15	-11	-10	-11	-10	-10	-8	-7
23	-5	-4	-3	-0	1	2	-3	-6	-5	-2	-1	-2	-1	-3	-6	-8	-9	-5	-3	-5	-1	-5	-7	-3
24	3	3	1	-2	-8	-7	-8	-8	-9	-10	-11	-7	-7	-8	-6	-2	-4	-6	-6	-5	-6	-5	-4	-1
25	5	7	8	9	7	7	5	3	0	1	1	3	6	2	-7	-13	-16	-13	-14	-16	-20	-14	-9	-10
26	-6	-5	-6	-8	-14	-16	-13	-19	-24	-31	-37	-38	-37	-34	-37	-39	-35	-27	-24	-22	-25	-52	-68	-59
27	-35	-32	-43	-48	-49	-51	-52	-50	-50	-48	-38	-30	-29	-29	-21	-30	-40	-47	-56	-55	-56	-47	-40	-39
28	-38	-36	-36	-37	-37	-37	-36	-32	3	11	-27	-100	-138	-177	-164	-156	-207	-247	-266	-245	-259	-244	-218	-190
29	-162	-158	-151	-141	-135	-127	-86	-72	-93	-83	-55	-74	-77	-76	-74	-73	-74	-75	-75	-72	-72	-72	-69	-69
30	-64	-61	-60	-60	-59	-59	-59	-57	-55	-53	-52	-50	-48	-43	-40	-36	-41	-39	-39	-44	-46	-47	-46	-45
31	-47	-46	-47	-48	-49	-49	-45	-36	-34	-32	-37	-36	-38	-37	-37	-37	-35	-31	-31	-27	-27	-28	-32	-35

## HOURLY EQUATORIAL DST VALUES

NOVEMBER 1961

	UNIT=GAMMAS																		G.M.T.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-32	-32	-34	-35	-30	-29	-29	-30	-30	-31	-31	-31	-29	-25	-23	-19	-16	-17	-20	-21	-19	-18	-20	-22
2	-19	-15	-13	-14	-14	-13	-16	-20	-24	-26	-28	-30	-24	-20	-18	-16	-13	-15	-16	-17	-18	-20	-17	-18
3	-18	-18	-19	-21	-20	-18	-15	-16	-19	-14	-13	-13	-14	-14	-15	-13	-12	-12	-13	-15	-18	-17	-16	-14
4	-11	-11	-14	-15	-19	-18	-17	-16	-11	-9	-8	-8	-7	-5	-5	-4	-3	-4	-5	-1	3	-8	-11	-14
5	-10	-11	-7	-4	-10	-17	-17	-16	-17	-21	-20	-14	-15	-25	-29	-33	-33	-32	-31	-31	-29	-29	-33	-29
6	-28	-27	-26	-29	-34	-36	-36	-33	-37	-33	-37	-38	-36	-31	-27	-23	-21	-20	-18	-16	-14	-13	-8	1
7	-0	-14	-19	-14	-19	-26	-36	-48	-58	-61	-55	-60	-68	-69	-74	-73	-65	-76	-81	-90	-85	-76	-81	-68
8	-62	-67	-70	-65	-67	-65	-66	-63	-59	-55	-53	-49	-47	-40	-35	-35	-35	-35	-34	-34	-40	-41	-42	-36
9	-33	-35	-37	-37	-39	-41	-40	-39	-36	-33	-34	-36	-35	-29	-24	-24	-27	-25	-24	-21	-21	-22	-23	-24
10	-25	-24	-23	-22	-21	-18	-15	-13	-14	-14	-13	-10	-9	-11	-15	-18	-20	-18	-19	-18	-17	-17	-16	-14
11	-15	-16	-15	-14	-14	-13	-13	-12	-10	-10	-10	-10	-11	-11	-11	-12	-11	-9	-4	-1	-1	-0	2	5
12	4	1	-6	-7	-9	-17	-26	-31	-29	-26	-31	-34	-40	-43	-42	-40	-39	-33	-29	-27	-26	-25	-23	-16
13	-20	-23	-27	-29	-29	-27	-24	-21	-18	-19	-18	-16	-16	-15	-14	-14	-14	-10	-6	-3	-4	-2	0	3
14	6	12	10	-0	-12	-3	-3	-13	-11	-8	-4	-0	-2	-5	-6	-6	-8	-12	-23	-27	-27	-24	-20	-18
15	-14	-13	-12	-14	-14	-13	-13	-13	-12	-10	-9	-7	-8	-6	-5	-7	-8	-6	-7	-8	-7	-11	-10	-7
16	-5	-5	-4	-3	-6	-7	-6	-1	-1	-0	-0	1	3	1	1	2	3	5	8	8	6	0	-4	-3
17	2	1	2	-0	-3	-1	2	7	7	7	8	6	7	7	2	-10	-7	-3	-1	4	-9	-14	-18	-17
18	7	-1	-31	-38	-37	-30	-13	-4	-31	-34	-44	-39	-35	-52	-56	-61	-58	-52	-53	-59	-55	-53	-50	-48
19	-48	-47	-40	-40	-44	-45	-41	-34	-29	-28	-27	-30	-28	-30	-27	-23	-23	-21	-20	-18	-17	-17	-15	-14
20	-13	-13	-15	-16	-18	-23	-25	-28	-24	-11	-12	-22	-32	-39	-37	-29	-27	-24	-27	-35	-38	-34	-33	-27
21	-25	-30	-32	-34	-33	-32	-29	-26	-22	-16	-12	-14	-15	-18	-15	-11	-10	-10	-11	-12	-12	-12	-15	-12
22	-12	-13	-14	-13	-5	-5	-2	0	2	1	0	-1	-0	2	1	-2	-5	-6	-4	-1	1	1	0	0
23	-2	-2	-2	-2	-3	-5	-2	2	3	1	2	2	2	2	4	7	8	7	3	3	4	5	6	3
24	-3	-4	-6	-7	-8	-6	-5	-4	-3	-1	-0	-1	-1	-1	-2	-2	-1	-1	0	2	4	6	5	6
25	7	7	6	6	6	8	12	9	4	3	5	8	10	13	11	10	10	10	10	10	9	7	7	7
26	7	8	9	7	9	11	12	13	8	3	2	4	9	10	10	11	13	10	9	12	14	7	3	1
27	-4	-5	-4	-4	-5	-4	-3	1	4	4	2	-0	-1	0	-2	-1	0	3	5	7	7	9	7	
28	5	3	2	2	4	8	11	14	15	15	10	7	6	3	2	1	-0	-1	2	2	2	5	8	8
29	8	6	4	1	-2	-0	3	4	5	3	0	1	3	4	6	8	11	13	14	11	9	8	7	3
30	3	5	6	5	4	5	3	6	10	10	8	8	8	7	7	7	8	13	15	14	15	18	19	21

## HOURLY EQUATORIAL DST VALUES

DECEMBER 1961

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	18	18	22	31	36	30	25	12	-10	-14	-38	-43	-61	-80	-104	-117	-124	-105	-96	-96	-85	-79	-72	-56
2	-68	-73	-68	-66	-62	-47	-44	-39	-45	-52	-58	-57	-62	-80	-93	-101	-95	-93	-104	-105	-104	-114	-127	-132
3	-113	-103	-104	-101	-98	-95	-94	-92	-85	-70	-79	-84	-75	-74	-70	-67	-63	-58	-55	-49	-49	-41	-42	-43
4	-42	-39	-36	-36	-38	-39	-37	-36	-34	-34	-35	-38	-38	-37	-36	-33	-30	-27	-23	-20	-19	-21	-23	-22
5	-23	-21	-23	-22	-21	-20	-19	-16	-13	-12	-13	-18	-19	-18	-5	-7	-16	-38	-42	-34	-39	-31	-32	-30
6	-29	-28	-24	-15	-22	-22	-23	-20	-20	-23	-21	-18	-24	-34	-38	-44	-55	-55	-46	-36	-31	-26	-26	-29
7	-27	-26	-22	-15	-9	-7	-8	-16	-19	-26	-24	-23	-27	-30	-25	-22	-21	-20	-20	-18	-17	-18	-21	-21
8	-22	-21	-19	-19	-18	-17	-17	-18	-16	-16	-13	-8	-9	-9	-7	-8	-5	-2	-2	-2	-1	-1	-4	-5
9	-6	-6	-7	-5	-6	-5	-4	-3	-5	-6	-6	-3	-4	-5	-4	-0	-0	-1	-1	-6	-7	-7	-5	-3
10	-5	-3	-1	-1	-5	-4	-4	-4	-4	-2	-6	-11	-14	-13	-10	-6	-3	-3	-5	-11	-21	-20	-18	-19
11	-19	-15	-15	-15	-14	-17	-19	-23	-23	-20	-24	-25	-28	-28	-33	-37	-40	-42	-46	-49	-49	-43	-39	-39
12	-37	-35	-31	-31	-28	-25	-21	-22	-20	-18	-18	-20	-21	-20	-14	-11	-7	-5	-9	-6	-3	-2	-4	-5
13	-8	-8	-6	-5	-5	-4	-4	-2	1	-0	2	8	8	2	8	8	2	8	9	9	9	5	-3	-10
14	-11	-8	-5	-5	-6	-8	-9	-7	-3	-2	-2	-0	-2	-1	2	7	9	8	7	4	4	2	1	-4
15	-8	-4	-0	0	-3	-4	-2	-2	-3	-5	-5	-7	-8	-10	-6	-4	-1	1	-1	-1	-4	-5	-5	-5
16	-6	-7	-5	-2	5	5	5	2	3	3	-1	-1	-5	-5	-3	-0	1	3	2	1	3	4	-1	-7
17	-9	-9	-6	-4	-5	-7	-7	-6	-3	-3	-5	-3	-3	-4	-5	-5	-5	-4	-2	-2	-1	-0	-0	-1
18	-2	-3	-2	2	6	8	7	7	8	10	9	7	6	6	7	7	7	6	6	6	5	5	7	5
19	6	7	11	11	11	10	11	12	14	16	14	15	17	15	11	9	8	9	10	10	10	10	10	9
20	10	11	11	10	10	11	8	6	7	8	8	7	7	8	8	9	7	7	6	7	7	8	10	10
21	12	12	13	13	15	18	20	20	20	16	16	16	16	14	14	14	14	17	15	12	11	11	11	14
22	13	15	16	19	16	16	16	15	16	19	18	16	10	1	-2	-2	-5	-9	-13	-10	-11	-8	-3	-3
23	-2	-2	-2	1	2	-0	-2	-7	-4	-0	-5	-12	-18	-16	-12	-3	1	2	4	5	5	2	7	20
24	24	20	7	2	1	3	5	6	8	9	5	-3	-4	-2	0	-4	-5	-5	-7	-7	-6	-5	-5	-5
25	-7	-6	-4	-3	-2	-1	-0	-0	-2	-5	-5	-2	-1	1	2	5	2	3	2	2	-0	0	3	5
26	7	9	10	12	11	11	10	11	11	11	6	6	6	6	3	3	3	1	-0	-3	-4	-4	1	12
27	14	39	28	15	11	11	5	4	3	-0	-2	-3	-4	-3	-1	4	9	10	9	11	20	20	19	11
28	7	6	1	4	4	2	5	9	8	2	-12	-18	-14	-9	-10	-25	-40	-36	-25	-21	-22	-19	-22	-29
29	-24	-20	-15	-19	-21	-18	-16	-13	-12	-13	-14	-9	-9	-11	-10	-8	-7	-5	-6	-6	-8	-8	-10	-9
30	-5	-3	-1	-9	-13	-14	-13	-11	-10	-10	-9	-10	-12	-15	-19	-27	-27	-24	-22	-20	-21	-20	-19	-17
31	-18	-18	-17	-16	-16	-15	-16	-14	-14	-14	-14	-14	-11	-10	-10	-12	-13	-9	-8	-10	-8	-8	-6	-12

## HOURLY EQUATORIAL DST VALUES

JANUARY 1962

	UNIT=GAMMAS																						G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-8	-8	-5	-5	-2	-0	-3	-2	-2	1	1	2	-0	-1	-1	-1	-1	1	3	6	6	4	-1	-9
2	-9	-11	-12	-8	-5	-5	-8	-16	-16	-12	-12	-12	-15	-16	-15	-13	-18	-19	-16	-11	-9	-11	-12	-12
3	-11	-8	-7	-6	-5	-4	-5	-4	-2	2	5	5	1	-4	-3	1	2	2	4	1	2	1	-0	-3
4	-6	-4	-2	-1	1	-0	-3	-3	-0	4	9	8	7	8	8	4	-0	1	5	7	8	7	6	4
5	3	4	6	5	5	4	4	4	8	10	14	17	14	17	22	22	19	17	15	16	17	17	14	13
6	14	13	12	13	14	14	16	18	18	19	19	15	13	14	17	17	11	8	5	8	14	18	18	15
7	14	15	18	20	21	23	22	22	24	27	28	24	23	23	22	16	7	8	10	8	1	-6	-7	-3
8	-9	3	4	3	3	3	2	4	6	10	14	19	17	12	9	4	8	12	15	15	15	15	16	16
9	17	16	14	14	14	13	13	16	17	17	15	13	8	7	9	8	4	-1	6	5	2	3	7	10
10	10	23	11	1	1	7	15	35	35	-0	-22	-41	-56	-66	-79	-82	-88	-79	-89	-80	-64	-67	-61	-51
11	-51	-47	-46	-45	-44	-39	-41	-39	-37	-36	-32	-29	-29	-32	-32	-33	-33	-34	-31	-31	-29	-29	-30	-27
12	-28	-28	-26	-24	-23	-23	-22	-19	-18	-17	-20	-24	-26	-27	-25	-23	-20	-17	-17	-19	-21	-21	-22	-18
13	-17	-16	-16	-16	-16	-14	-14	-12	-8	-11	-14	-16	-15	-15	-13	-10	-8	-7	-6	-8	-12	-14	-10	-5
14	1	4	6	4	4	3	1	0	-1	-2	0	4	2	1	-6	-17	-21	-20	-18	-25	-28	-36	-28	-15
15	-11	-12	-15	-14	-12	-12	-11	-16	-16	-14	-14	-14	-15	-16	-15	-14	-8	-4	-6	-7	-9	-16	-12	-5
16	-4	-4	-5	-5	-6	-10	-5	0	4	5	0	-2	-10	-3	-3	-4	-7	-9	-8	-11	-13	-10	-10	-8
17	-6	-7	-9	-11	-11	-11	-11	-8	-7	-7	-5	-4	-10	-10	-8	-8	-7	-8	-12	-15	-12	-9	-9	-7
18	-4	-1	-1	-1	-1	0	2	6	6	5	3	-0	-1	1	-3	-7	-4	-0	0	3	5	2	6	10
19	18	24	23	25	23	10	-4	-5	-4	-4	2	6	8	0	-17	-27	-34	-38	-24	-23	-22	-25	-25	-18
20	-12	-10	-11	-15	-16	-16	-16	-17	-17	-18	-18	-21	-22	-21	-17	-17	-15	-15	-17	-13	-7	-5	-2	1
21	2	5	5	5	3	1	0	1	-2	-6	-5	-3	-2	-4	-1	-2	-5	-5	-6	-4	-4	-9	-9	-6
22	-5	-4	-5	-6	-7	-6	-7	-7	-7	-10	-9	-6	-4	-4	-6	-6	-5	-3	-3	-6	-5	-3	-1	0
23	1	1	0	1	1	3	4	6	6	2	1	-1	-2	-6	-8	-5	-1	1	1	-1	0	1	2	4
24	5	6	6	5	6	8	10	12	11	8	3	1	2	4	3	4	6	8	9	9	8	5	6	10
25	13	14	12	12	13	17	23	24	19	13	12	8	8	12	13	14	15	18	17	15	12	13	14	17
26	14	16	5	3	3	3	7	12	15	13	11	5	2	2	-2	-2	-5	-10	-16	-15	-8	-8	-9	-7
27	-2	4	5	3	1	-1	1	5	5	7	-3	-2	-1	-7	-10	-10	-10	-10	-13	-13	-10	-8	-6	-6
28	-5	-3	-3	-4	-4	-4	-0	4	7	2	-0	-0	-2	-5	-8	-6	-4	-4	-7	-7	-6	-8	-11	-9
29	-7	-6	-6	-5	-3	-1	2	6	8	7	9	12	9	-4	-9	-9	-6	-5	-7	-5	-1	1	-2	-8
30	-8	-11	-11	-7	-6	-4	0	4	6	5	-9	-4	-11	-10	-8	-4	-0	2	6	5	1	-2	-2	-0
31	0	1	1	0	-3	-1	2	7	11	12	10	9	6	2	-3	-1	-2	-2	-3	-1	4	7	7	7

## HOURLY EQUATORIAL DST VALUES

FEBRUARY 1962

	UNIT=GAMMAS																				G.M.T.			
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	7	5	6	7	8	11	14	17	20	21	23	24	23	20	20	21	21	21	19	18	19	19	14	12
2	6	7	10	10	11	8	6	13	19	20	20	19	15	15	12	11	9	6	3	0	-1	-2	-4	-0
3	2	4	3	4	3	4	3	6	10	14	18	19	18	18	15	10	8	7	3	-2	1	2	2	4
4	9	13	13	12	12	9	8	15	26	46	59	46	34	3	-19	-33	-50	-61	-60	-55	-55	-50	-35	-27
5	-18	-20	-38	-43	-41	-39	-39	-36	-34	-33	-28	-24	-21	-20	-18	-16	-12	-13	-15	-18	-20	-18	-17	-17
6	-15	-14	-16	-16	-16	-15	-14	-9	-4	-5	-7	-7	-4	-2	-3	-4	-3	-1	-3	-5	2	4	-2	-3
7	-5	2	5	1	-4	-4	-8	-8	0	-10	-7	-3	2	-1	-5	-14	-20	-22	-16	-17	-19	-18	-14	-11
8	-9	-9	-7	-7	-7	-5	-4	-4	-4	-3	-3	-3	-4	-3	-1	-0	1	2	2	2	4	2	3	6
9	2	2	4	5	5	6	5	1	-1	1	1	2	4	7	7	3	-3	-6	-5	-3	-3	-2	-0	2
10	3	6	8	8	8	9	9	11	10	8	4	2	1	1	3	3	0	2	4	7	9	11	11	12
11	10	7	7	8	9	9	12	16	16	19	24	20	16	18	23	25	25	21	5	-20	-41	-45	-47	-50
12	-55	-48	-36	-32	-30	-30	-29	-26	-21	-17	-14	-13	-15	-19	-25	-29	-31	-31	-32	-33	-25	-29	-29	-24
13	-20	-17	-18	-15	-11	-9	-8	-5	-7	-7	-5	-4	-2	1	-4	-14	-19	-16	-15	-13	-13	-13	-19	-15
14	-17	-20	-19	-20	-21	-18	-13	-10	-8	-9	-9	-9	-7	-4	-6	-9	-6	-4	-8	-12	-14	-5	-9	-7
15	-3	-6	-8	-9	-5	-0	3	5	3	2	2	3	1	3	7	12	4	-6	-3	7	16	20	22	27
16	32	37	36	39	43	39	31	20	-2	-14	-13	-28	-33	-32	-54	-72	-77	-75	-79	-74	-77	-69	-60	-49
17	-48	-49	-46	-47	-45	-39	-37	-28	-32	-37	-36	-27	-21	-17	-18	-23	-22	-22	-26	-27	-28	-28	-25	-20
18	-19	-19	-18	-16	-15	-13	-13	-16	-18	-21	-15	-9	-7	-6	-8	-10	-8	-11	-13	-13	-12	-16	-14	-12
19	-9	-9	-8	-7	-8	-8	-8	-7	-7	-8	-8	-6	-6	-8	-8	-5	-3	-2	-1	-2	-2	0	4	
20	6	6	5	3	2	2	2	-0	-2	-4	-5	-1	4	2	7	1	-0	1	3	4	3	4	5	7
21	9	8	7	6	2	-3	-3	-3	-2	-3	-4	-2	2	6	9	3	-2	-9	-9	-7	-4	-0	-0	2
22	4	15	24	16	9	9	8	8	6	5	1	0	-3	0	-3	-14	-14	-9	-7	-8	-6	-2	0	1
23	2	0	-2	-4	-6	-5	-2	1	2	-1	-3	1	6	7	-1	-7	-4	-1	-3	-6	-10	-10	-9	-8
24	-5	-2	-1	-1	-2	-3	-2	1	1	-4	-6	-3	-7	-9	-15	-22	-23	-24	-20	-19	-10	-8	-6	-5
25	-2	-0	-2	-6	-5	-6	-3	-2	1	2	4	4	5	2	-0	-2	2	8	9	5	5	-5	-11	
26	-11	-8	-5	-1	-2	-2	-0	3	8	16	25	38	55	62	64	48	26	4	-16	-30	-26	-18	-20	-22
27	-19	-13	-8	-5	2	10	9	-0	-5	-14	-17	-17	-17	-20	-23	-31	-35	-32	-33	-38	-34	-29	-28	-28
28	-24	-19	-17	-15	-15	-14	-14	-13	-12	-10	-6	-6	-3	0	4	2	3	3	-0	-3	-1	-1	-2	-3

## HOURLY EQUATORIAL DST VALUES

MARCH 1962

	UNIT=GAMMAS																			G.M.T.				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-3	-3	-2	-2	-1	1	2	-0	-3	-1	3	9	13	6	3	4	2	3	2	4	7	4	-1	-4
2	-6	-5	-5	-7	-8	-8	-6	-6	-7	-6	-5	-2	5	2	-3	-9	-13	-17	-13	-10	-4	-2	-3	-3
3	3	6	5	2	2	4	7	10	13	15	20	20	7	-5	-13	-18	-21	-22	-27	-32	-33	-33	-28	
4	-25	-18	-13	-12	-10	-5	-2	2	6	6	5	4	4	7	6	2	1	6	8	7	6	7	5	8
5	10	11	10	11	10	12	16	14	8	3	6	9	8	-4	-9	-11	-20	-20	-23	-21	-15	-15	-10	-4
6	0	1	-14	-17	-16	-11	-13	-6	-3	-6	-9	1	-8	-6	-18	-26	-31	-30	-32	-28	-27	-26	-25	-22
7	-16	-16	-17	-18	-17	-13	-16	-17	-14	-12	-12	-12	-11	-11	-11	-11	-12	-11	-10	-8	-8	-8	-10	-10
8	-8	-8	-7	-8	-8	-7	-7	-4	-4	-4	-4	-5	-5	-5	-5	-6	-7	-7	-6	-6	-5	-5	-7	-7
9	-4	-3	-2	-1	1	1	3	5	6	6	5	2	1	-1	-4	-4	-2	1	1	1	2	5	7	9
10	5	-0	-1	-4	-8	-10	-7	-3	-5	-7	-12	-13	-13	-14	-17	-17	-21	-18	-10	-7	-10	-23	-30	-24
11	-15	-18	-16	-14	-12	-11	-11	-11	-9	-6	-3	-4	-4	-5	-7	-10	-18	-20	-17	-17	-11	-12	-10	-8
12	-6	-3	-3	-5	-6	-5	-2	-4	-2	-0	3	-3	-14	-20	-22	-30	-29	-19	-32	-38	-35	-34	-25	-28
13	-18	-16	-16	-15	-16	-14	-14	-12	-11	-11	-9	-7	-8	-9	-10	-13	-8	-9	-6	-4	-3	-2	-5	-5
14	-4	-4	-3	-3	-3	-2	-3	-4	-5	-3	2	3	2	-3	-3	-3	-2	2	4	3	5	7	8	7
15	4	-3	-5	-10	-13	-10	-8	-1	6	10	11	13	12	13	12	8	9	11	10	8	3	0	7	11
16	12	9	8	8	8	9	8	6	6	6	8	10	11	10	8	4	4	7	10	11	13	12	11	12
17	13	12	8	6	7	8	8	8	8	11	12	15	12	8	6	5	7	8	11	12	14	15	14	15
18	16	17	15	15	19	23	21	20	20	20	23	22	19	13	13	8	5	5	3	-3	-2	2	4	4
19	3	7	11	9	2	0	5	8	13	15	14	12	1	-11	-14	-14	-7	-15	-28	-28	-28	-15	-8	-8
20	-4	-3	-4	-7	-7	-6	-4	0	3	6	9	12	9	4	1	-3	-8	-15	-17	-8	-3	-7	-14	-16
21	-12	-10	-8	-9	-11	-9	-9	-14	-13	-8	-5	-4	-3	-6	-12	-16	-20	-22	-19	-20	-26	-28	-12	-6
22	-4	-3	-3	-4	-3	-2	-1	-3	-3	-2	1	2	2	3	3	3	4	6	10	11	12	5	3	5
23	6	6	5	4	4	5	3	2	-0	-1	1	-3	-3	-0	1	1	2	6	8	12	15	16	15	14
24	6	3	5	3	4	3	2	-2	-4	-5	-1	-0	2	5	6	6	5	5	10	15	18	18	14	17
25	14	8	3	-3	-4	-1	-4	-4	-6	-5	-6	-6	-11	-12	-9	-7	-8	-6	-1	1	0	2	4	6
26	2	-0	1	-0	-0	1	0	-1	-2	-1	0	1	2	4	4	5	7	11	13	16	16	16	14	12
27	11	10	12	14	14	13	10	10	11	10	10	12	10	10	13	18	23	20	19	21	21	19	18	17
28	16	15	15	17	17	18	20	20	18	15	13	12	11	10	9	7	7	6	6	4	-1	-2	-0	-6
29	-16	-17	-14	-12	-9	-10	-10	-6	-5	-1	5	4	-0	-2	-0	2	4	4	3	4	7	11	7	6
30	3	3	4	5	4	3	3	2	3	4	5	6	7	10	13	13	12	8	6	1	-0	-0	-0	-0
31	4	9	11	13	16	17	17	14	14	12	12	13	15	14	15	16	18	16	18	24	29	31	26	25

## HOURLY EQUATORIAL DST VALUES

APRIL 1962

	UNIT=GAMMAS																				G.M.T.			
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	24	22	18	8	3	-1	3	-2	-0	-1	-4	-8	-5	-5	-3	-3	-5	-7	-8	-5	-2	2	4	3
2	-1	-2	-3	-0	3	4	3	3	5	5	4	3	1	1	-1	-3	-0	2	0	-5	-2	-2	-15	-4
3	5	3	5	4	3	-6	-11	-9	-4	1	-0	-4	-5	-5	-4	-7	-8	-11	-17	-15	-14	-5	-3	-5
4	-4	1	-1	-2	-8	-3	-7	-7	-15	-20	-13	-5	-4	-2	-3	-3	-1	1	2	4	5	2	-10	-8
5	-17	-19	-18	-12	-12	-10	-10	-10	-9	-10	-8	-7	-3	0	2	3	6	8	11	13	15	20	24	21
6	24	28	26	17	8	8	-2	-8	-11	0	-5	-3	-7	-8	-7	-7	-3	-13	-23	-23	-36	-29	-27	-33
7	-42	-26	-29	-32	-27	-23	-36	-41	-33	-40	-35	-31	-39	-44	-45	-37	-28	-30	-32	-40	-34	-47	-42	-38
8	-33	-35	-36	-33	-33	-29	-26	-23	-20	-16	-12	-9	-13	-19	-24	-43	-41	-52	-56	-57	-43	-32	-34	-41
9	-32	-27	-26	-24	-24	-25	-26	-30	-27	-22	-20	-19	-20	-19	-21	-20	-19	-22	-21	-25	-23	-14	-14	-16
10	-16	-15	-19	-16	-12	-10	-7	-10	-10	-18	-24	-24	-18	-16	-31	-42	-36	-49	-52	-56	-52	-37	-25	-29
11	-38	-29	-38	-36	-31	-27	-27	-32	-30	-25	-22	-16	-13	-12	-15	-23	-36	-35	-29	-30	-28	-26	-27	-25
12	-26	-30	-26	-22	-23	-21	-21	-23	-23	-18	-14	-11	-12	-16	-18	-17	-17	-18	-17	-18	-21	-24	-26	-16
13	-17	-20	-21	-20	-19	-20	-21	-22	-21	-20	-18	-15	-13	-12	-13	-15	-17	-20	-19	-17	-14	-11	-10	-11
14	-8	-9	-8	-6	-4	-4	-4	-3	-4	-4	-5	-5	-3	0	2	1	-1	-1	-1	-0	3	5	5	5
15	5	3	1	0	-0	-1	1	1	2	5	3	3	14	30	34	23	14	11	19	24	23	21	17	7
16	3	4	5	1	1	2	3	3	1	-6	-2	-1	0	1	0	-1	-4	-4	-1	-2	-2	3	3	5
17	-1	-7	-9	-8	-8	-4	-1	0	-1	-6	-2	2	3	1	0	2	4	2	-1	-2	-2	-1	1	0
18	0	-4	-7	-10	-11	-13	-15	-13	-16	-17	-13	-6	-2	1	-5	-3	-3	-8	-6	-11	-8	-2	-3	-4
19	-8	-11	-6	-4	-3	-6	-6	-6	-3	-2	-4	-3	-2	-2	0	3	4	3	0	1	3	4	1	-4
20	-10	-8	-9	-7	-7	-4	-1	1	0	1	3	5	7	10	10	10	11	10	8	6	5	4	7	22
21	27	25	27	27	25	25	19	15	16	24	27	27	26	23	23	22	4	-29	-45	-52	-39	-34	-40	-46
22	-39	-38	-36	-36	-34	-39	-37	-27	-28	-29	-28	-33	-30	-31	-37	-35	-40	-43	-45	-50	-52	-44	-35	-41
23	-43	-37	-35	-29	-30	-31	-23	-24	-17	-16	-17	-14	-15	-17	-21	-22	-23	-21	-19	-23	-25	-24	-24	-22
24	-18	-14	-11	-10	-12	-12	-11	-10	-11	-11	-13	-10	-10	-9	-6	1	2	1	3	4	3	-1	-2	-4
25	-6	-5	-5	-5	-6	-6	-5	-5	-5	-4	-7	-13	-5	4	4	-0	-5	3	-1	-8	-11	-5	-4	-7
26	-6	-4	-3	-0	-3	-8	-15	-3	-16	-15	-15	-17	-20	-20	-18	-15	-12	-11	-8	-7	-10	-16	-15	-13
27	-14	-15	-15	-16	-17	-20	-19	-16	-11	-12	-16	-17	-18	-20	-19	-19	-17	-15	-17	-20	-12	-8	-8	-9
28	-9	-9	-11	-15	-14	-7	-10	-7	-5	-3	-3	-1	-3	-7	-10	-9	-8	-4	-2	-5	-9	-9	-11	-10
29	-7	-8	-7	-6	-6	-5	-7	-5	-4	-5	-4	-6	-9	-7	-10	-6	-5	-5	-6	-12	-15	-15	-13	-8
30	-3	-0	-0	-0	0	-0	-0	-0	1	0	0	0	0	-3	-7	-12	-14	-11	-8	-8	-11	-11	-9	-8

## HOURLY EQUATORIAL DST VALUES

MAY 1962

	UNIT=GAMMAS																				G.M.T.				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-9	-3	-6	-10	-12	-15	-13	-10	-9	-7	-7	-5	-6	-7	-8	-8	-7	-5	-3	-6	-11	-14	-14	-11	
2	-9	-13	-19	-20	-19	-16	-12	-9	-7	-9	-7	-2	-2	-1	-2	-0	-0	-2	-3	-8	-17	-25	-28	-24	
3	-20	-14	-13	-11	-10	-11	-12	-14	-11	-6	-6	-2	2	2	-1	-3	-3	-5	-7	-8	-5	-2	-4	-2	
4	0	5	5	3	2	4	5	4	4	4	6	8	7	8	9	9	11	14	15	15	14	12	12	14	
5	15	13	12	10	9	8	8	10	11	14	16	17	17	21	21	21	26	37	46	51	46	38	33	39	
6	43	40	35	31	30	28	29	32	31	20	12	5	-11	-27	-46	-57	-71	-72	-75	-72	-63	-66	-58	-49	
7	-40	-35	-27	-29	-32	-31	-28	-26	-26	-25	-19	-15	-12	-15	-18	-21	-24	-22	-18	-19	-20	-22	-27	-26	
8	-22	-12	-13	-9	-8	-8	-8	-7	-5	-4	-3	-2	-4	-5	-5	-6	-10	-11	-10	-8	-9	-16	-10	-11	
9	-13	-14	-15	-15	-14	-12	-9	-9	-9	-8	-5	-1	-1	-0	1	2	3	5	9	11	12	10	7	5	
10	5	3	3	3	1	-0	0	0	2	3	4	5	5	4	0	-3	-4	1	6	6	6	4	-1	-3	
11	-4	-2	-1	2	8	9	10	13	14	15	18	17	16	15	13	6	-7	-19	-22	-21	-16	-17	-12	-12	
12	-10	-6	-4	-5	-6	-8	-8	-5	-2	-1	-3	-0	-3	-6	-4	-2	-1	-1	1	4	8	8	7	7	
13	8	12	10	2	-4	-5	-1	2	6	7	4	9	6	5	5	8	6	3	1	2	-10	-20	-16	-26	
14	-29	-26	-25	-25	-20	-18	-16	-8	-1	-4	-6	-3	-6	-5	-6	-4	-4	-4	-8	-11	-17	-19	-18	-12	
15	-10	-5	-3	-6	-5	-3	-1	-1	-0	2	4	6	4	-1	-5	-5	-8	-14	-13	-14	-6	-4	-4	-3	
16	-1	3	3	-0	-10	-16	-15	-8	-5	-2	-7	-5	-2	-2	-6	-8	-8	-6	-7	-7	-4	-6	-8	-8	
17	-5	-2	-2	-3	-2	-3	-2	-2	-1	0	-3	-3	-5	-8	-11	-10	-8	-4	2	5	3	1	-6	1	
18	3	3	2	3	2	0	1	4	6	6	7	4	0	-1	-3	-3	-1	1	1	4	5	5	6	7	
19	9	11	11	10	10	9	4	3	-3	-2	-1	-1	-3	-4	-7	-7	-4	1	2	-0	-1	-3	-2	-2	
20	-1	0	0	2	3	4	7	9	9	6	6	5	4	2	-0	-3	-1	5	6	2	-2	-4	-6	-6	
21	-1	4	3	2	3	3	4	3	4	6	9	10	8	4	2	3	5	5	3	3	5	4	5		
22	5	9	10	9	7	7	8	9	10	12	12	10	5	4	4	6	7	5	6	6	7	8	7		
23	9	10	12	9	8	8	9	10	11	10	12	12	11	10	6	6	4	1	2	0	1	5	4	2	
24	3	2	2	5	8	9	9	8	7	5	5	13	16	17	17	16	16	16	15	15	16	17	16	15	
25	14	16	17	18	20	20	20	19	20	20	20	21	21	22	22	24	22	21	21	20	19	19	21	22	
26	20	21	22	23	22	24	26	28	29	31	32	36	37	34	31	32	34	31	27	23	21	18	10	7	
27	11	14	18	27	27	15	8	5	2	3	7	11	12	8	2	0	-2	-3	-6	-10	-15	-18	-14	-13	
28	-12	-10	-8	-3	-2	-3	0	2	2	-2	-6	-8	-8	-9	-9	-10	-10	-20	-25	-27	-29	-23	-10	-2	
29	1	-1	-6	-9	-9	-8	-7	-2	-8	-5	-6	-6	-7	-7	-6	-2	0	-2	-4	-5	-6	-5	-4	-2	
30	-2	-1	-2	-2	-1	1	4	6	6	6	6	3	-1	0	1	1	3	3	4	4	3	1	4	10	15
31	18	20	23	25	20	6	-9	-6	-4	-7	-19	-23	-26	-30	-25	-28	-38	-43	-43	-40	-42	-43	-37	-36	

## HOURLY EQUATORIAL DST VALUES

JUNE 1962

	G.M.T.																							
	UNIT=GAMMAS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-29	-24	-19	-18	-20	-21	-19	-11	-17	-14	-14	-15	-12	-12	-9	-7	-11	-12	-16	-22	-22	-18	-18	-20
2	-17	-14	-11	-9	-7	-9	-10	-10	-8	-6	-6	-7	-7	-7	-7	-6	-7	-12	-16	-15	-13	-10	-6	-6
3	-7	-5	-5	-4	-3	-3	-4	-3	-3	0	3	5	5	7	6	5	4	5	6	4	-1	-8	-7	-11
4	-18	-12	-14	-7	-5	-5	-2	-6	-11	-14	-13	-9	-8	-11	-12	-15	-18	-18	-17	-23	-17	-23	-25	-19
5	-16	-15	-12	-11	-9	-9	-10	-7	-11	-9	-7	-6	-7	-11	-13	-15	-19	-23	-29	-24	-24	-25	-30	-31
6	-34	-34	-22	-20	-21	-20	-19	-24	-20	-19	-16	-12	-14	-18	-15	-11	-13	-17	-19	-15	-16	-11	-10	-6
7	1	2	3	6	14	25	14	0	-4	-7	-11	-12	-16	-14	-14	-17	-19	-20	-20	-19	-18	-19	-20	-18
8	-15	-10	-5	-1	1	0	1	0	1	3	6	5	-2	-5	-6	-2	1	4	6	9	11	13	11	9
9	11	8	5	1	-4	-4	0	-1	5	4	10	11	6	-1	-8	-7	-7	-12	-22	-25	-19	-15	-21	-21
10	-15	-18	-15	-12	-10	-13	-13	-16	-15	-15	-17	-11	-15	-15	-14	-12	-14	-16	-16	-13	-10	-9	-10	-11
11	-10	-8	-5	-3	-3	-4	-5	-5	-8	-7	-5	-4	-2	-2	-2	-1	-4	-5	-8	-10	-9	-9	-15	-15
12	-10	-5	-1	2	4	3	5	1	-1	2	5	4	-5	-7	-5	-0	-1	-3	-5	-7	-10	-6	-6	-4
13	-5	-4	-2	-0	-1	-1	-0	0	-1	1	1	3	4	4	6	6	3	1	1	3	2	3	4	5
14	5	6	6	4	2	3	6	5	5	5	9	10	9	4	4	5	-0	-8	-10	-5	-0	-2	-9	-7
15	-8	-9	-5	2	1	3	6	9	7	5	3	1	-2	-3	-1	-2	-5	-6	-5	1	-2	-3	-3	-4
16	-9	-4	-2	1	0	-0	-1	-1	-1	2	4	3	-3	-4	-6	-7	-7	-6	-4	-4	-6	-6	-6	-7
17	-5	0	5	6	7	6	6	6	6	9	8	5	7	11	11	12	12	12	9	9	7	7	7	6
18	3	6	9	12	12	12	12	10	9	9	9	12	14	18	21	21	21	19	15	11	11	11	14	15
19	16	16	14	13	12	12	14	15	14	14	13	8	9	9	10	8	5	5	8	13	15	16	15	16
20	15	14	17	19	19	19	16	16	15	15	17	22	26	27	23	21	22	21	21	21	20	19	18	20
21	20	18	22	26	26	27	27	28	29	29	22	19	20	23	18	7	9	12	6	1	3	5	4	-5
22	-15	-15	-10	-8	-3	-4	-2	-1	-1	-3	-5	-2	0	1	0	3	5	6	5	2	1	2	1	-5
23	-5	-5	-6	-2	-4	-1	-3	3	3	2	6	7	9	8	6	4	-4	-11	-20	-18	-23	-27	-27	-21
24	-17	-13	-9	-6	-4	-5	-5	-6	-5	-1	2	5	4	1	-1	-1	-1	-2	-1	1	-0	-1	-2	-2
25	-1	2	4	4	-0	-5	-10	-8	-7	-3	-1	-1	-6	-7	-5	-2	1	-2	-4	-2	4	3	-1	-5
26	-5	-4	-3	-1	-1	-0	1	0	4	9	11	10	11	11	7	5	8	2	-1	-4	-3	-6	1	4
27	5	4	5	8	4	-5	-8	-21	-31	-32	-27	-26	-25	-25	-21	-15	-14	-21	-30	-26	-22	-26	-21	-21
28	-23	-21	-15	-8	-8	-6	-12	-10	-5	-11	-10	-10	-8	-10	-13	-9	-2	-3	-8	-13	-13	-25	-15	-13
29	-11	-11	-9	-5	-5	-3	-2	-2	-4	-2	4	-0	-7	-13	-11	-8	-4	-6	-11	-8	-8	-8	-9	-7
30	-2	-3	-1	-6	-9	-12	-14	-8	-4	-9	-6	-3	-5	-3	-2	-3	-8	-11	-12	-11	-12	-15	-18	-17

## HOURLY EQUATORIAL DST VALUES

JULY 1962

	UNIT=GAMMAS																						G.M.T.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-12	-9	-7	-3	-2	-1	0	2	2	-2	0	-0	-3	-4	-6	-5	-5	-3	2	4	2	-2	-4	-8	
2	-5	-2	1	2	4	3	4	2	2	4	7	9	11	12	13	13	13	4	-3	-6	-11	-17	-28	-28	
3	-22	-14	-11	-8	-6	-5	1	1	1	5	9	13	14	12	13	18	24	17	14	9	6	5	2	1	
4	0	-1	2	5	11	11	11	8	7	6	13	14	14	11	7	7	10	12	11	7	-6	3	-14	-18	
5	-13	-11	-9	-10	-15	-4	-6	-8	-8	-11	-8	-3	-1	2	7	8	6	-1	-4	-8	-2	5	5	6	
6	6	5	0	-10	-10	-8	-6	-8	-11	-4	-7	-8	-5	-7	-4	1	1	-4	1	10	7	-0	-5	-5	
7	-2	0	2	3	4	4	5	5	4	6	9	14	17	18	14	11	7	-3	-9	-5	-3	-8	-5	1	
8	2	-3	-3	-3	-1	3	5	2	2	3	1	2	7	10	12	11	9	7	4	2	-5	-7	-7	-4	
9	-2	-2	-1	0	-1	-0	1	5	4	3	-0	1	3	4	3	2	0	2	4	4	4	5	5	6	
10	6	7	5	4	4	4	6	10	10	9	10	12	10	14	12	6	2	3	6	7	6	7	5	5	
11	6	5	3	-1	1	1	1	3	7	6	6	4	1	1	6	14	13	11	8	2	-0	-8	-7	-4	
12	0	3	3	2	1	4	1	2	1	0	2	6	7	6	4	8	11	14	15	17	16	14	10	5	
13	1	2	-1	-3	-1	4	5	4	3	-0	-0	4	10	12	17	15	6	-2	-6	-11	-11	-14	-14	-11	
14	-14	-12	-9	-9	-10	-6	-9	-6	-6	-5	-5	-6	-4	-1	-2	-4	-8	-6	-5	-4	-10	-10	-6	-8	
15	-7	-3	0	-1	-2	-1	2	4	3	2	-1	-0	1	5	9	13	11	8	8	4	1	1	-5	-8	
16	-5	0	1	2	3	3	4	4	5	6	6	9	6	7	7	9	9	8	7	8	9	10	12	14	
17	14	14	11	9	11	11	12	12	11	12	14	11	10	10	10	8	9	11	14	14	12	9	5	5	
18	7	4	3	4	6	8	10	13	14	14	14	17	15	12	15	17	18	17	15	14	15	15	17	19	
19	21	25	27	25	23	20	21	17	16	14	17	19	20	20	21	23	22	17	13	6	4	8	7	4	
20	1	2	-4	-8	-8	-12	-3	-4	-9	-5	-2	2	7	7	7	5	2	-2	-1	-1	-1	-4	-8	-11	
21	-8	-7	-5	-2	0	-1	-2	-4	-4	-7	-1	9	14	13	11	11	6	-2	1	-2	-9	-13	-18	-19	
22	-12	-3	-3	-0	-1	-0	-6	-11	-7	-2	4	3	6	11	10	6	1	-4	-1	-1	-3	-9	-8	-5	
23	-4	-4	-4	-3	-3	-7	-11	-10	-4	-6	-6	-5	-4	1	2	3	11	12	2	-8	-13	-15	-14	-14	
24	-17	-14	-10	-8	-5	-2	-1	1	5	8	12	13	16	19	14	-2	-17	-26	-36	-36	-39	-45	-51	-57	
25	-55	-54	-48	-44	-44	-36	-36	-32	-28	-24	-20	-15	-9	-3	-2	-4	-7	-8	-7	-7	-3	5	16	28	
26	37	47	44	31	4	-22	-37	-47	-47	-35	-27	-29	-22	-25	-26	-28	-29	-33	-27	-29	-35	-31	-27	-32	
27	-22	-27	-24	-24	-27	-27	-23	-20	-20	-17	-16	-14	-11	-15	-27	-25	-21	-12	-8	-12	-21	-25	-23	-21	
28	-22	-17	-25	-21	-21	-24	-20	-26	-23	-22	-23	-21	-20	-18	-23	-20	-20	-19	-17	-25	-27	-29	-26		
29	-20	-19	-22	-20	-19	-19	-18	-21	-19	-14	-13	-14	-9	-3	-3	-7	-9	-7	-5	-6	-12	-11	-11	-9	
30	-5	-3	-7	-12	-13	-13	-18	-18	-17	-15	-17	-17	-14	-11	-10	-10	-12	-11	-11	-12	-11	-10	-7	-5	
31	-6	-8	-8	-6	-2	-1	-3	-5	-5	-5	-5	-5	-1	5	14	23	29	27	28	22	4	-2	5	10	5

## HOURLY EQUATORIAL DST VALUES

AUGUST 1962

	UNIT=GAMMAS																		G.M.T.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-14	-21	-12	-25	-25	-32	-33	-28	-21	-32	-39	-30	-28	-27	-33	-36	-37	-35	-37	-37	-38	-44	-41	-28
2	-24	-23	-22	-18	-14	-14	-12	-12	-13	-13	-10	-4	-1	2	2	-3	-11	-21	-23	-16	-15	-12	-10	-12
3	-16	-13	-17	-14	-15	-15	-13	-13	-12	-14	-16	-13	-13	-7	-4	-2	0	3	-4	-13	-19	-12	-12	-12
4	-12	-12	-8	-5	-6	-10	-11	-11	-10	-8	-7	-5	-4	-4	-3	-2	-2	-1	-1	-5	-5	-8	-8	-12
5	-15	-13	-10	-8	-5	-3	0	-5	-4	-1	-4	-7	-3	4	7	7	1	-5	-5	-4	-9	-8	-6	-5
6	-8	-7	-4	1	-4	-12	-20	-10	-13	-9	-7	-1	-1	2	7	-1	-9	-12	-8	-13	-19	-25	-27	-29
7	-17	-12	-16	-9	-13	-12	-11	-11	-11	-7	-5	-6	-4	-0	1	-4	-19	-35	-35	-30	-30	-23	-15	-20
8	-33	-30	-20	-21	-14	-9	-16	-6	-20	-21	-10	-0	-7	-10	-14	-11	-12	-7	-8	-10	-18	-29	-30	-27
9	-30	-27	-14	-10	-10	-4	-14	-9	-12	-5	-7	-10	-11	-8	-7	-9	-11	-16	-21	-20	-17	-9	-12	-14
10	-10	-14	-14	-12	-13	-13	-8	-11	-17	-13	-14	-14	-10	-7	-5	-9	-11	-15	-15	-13	-17	-17	-17	-17
11	-17	-16	-13	-10	-7	-6	-6	-7	-7	-6	-7	-6	-3	1	2	1	-1	-4	-3	-0	0	1	-1	-2
12	-2	-3	-1	-2	-0	2	3	3	2	2	-2	2	2	1	-0	1	1	-2	-3	-5	-9	-2	-2	-1
13	-1	1	4	5	6	6	5	5	6	6	4	3	6	10	10	12	14	15	16	17	14	11	9	16
14	10	8	4	2	9	7	7	9	13	17	15	13	19	22	23	21	15	10	4	-5	-8	-8	-5	0
15	-4	-1	3	3	-2	-21	-20	-11	-21	-19	-16	-13	-10	-8	-4	-3	-6	-9	-10	-14	-24	-23	-32	-45
16	-52	-44	-33	-27	-28	-28	-21	-24	-19	-16	-15	-15	-13	-7	-0	2	-1	-4	-14	-20	-18	-27	-35	-36
17	-26	-20	-13	-10	-9	-10	-12	-19	-24	-20	-16	-16	-15	-2	1	3	3	1	-9	-3	-13	-29	-18	-26
18	-28	-18	-15	-15	-9	-4	-21	-22	-20	-19	-20	-20	-18	-13	-14	-14	-17	-18	-17	-21	-26	-26	-22	-22
19	-10	-8	-8	-12	-13	-6	-13	-16	-22	-17	-18	-13	-8	-2	-6	-7	-8	-11	-14	-18	-24	-25	-21	-15
20	-13	-10	-7	-5	-4	-4	-6	-9	-10	-7	-4	-4	-1	1	4	4	-1	2	-4	-4	-3	-4	-7	-7
21	-4	-4	-5	-4	-2	-1	-2	-4	-3	-1	-0	-0	1	7	9	11	15	15	18	16	9	2	-11	-25
22	-30	-24	-23	-20	-21	-17	-12	-24	-24	-17	-12	-10	-8	-3	-6	-3	-3	-3	-5	-16	-32	-23	-13	-12
23	-17	-10	-9	-7	-9	-7	-11	-18	-21	-22	-13	-14	-15	-18	-16	-14	-14	-17	-13	-14	-15	-14	-15	-16
24	-17	-2	-5	-4	-3	1	3	-14	-19	-13	-8	-8	-13	-13	-11	-15	-21	-27	-26	-25	-26	-29	-20	-21
25	-19	-14	-10	-8	-8	-8	-8	-11	-13	-13	-17	-20	-17	-15	-14	-17	-17	-14	-19	-23	-16	-17	-18	-18
26	-14	-9	-8	-6	-4	-1	-4	-5	-8	-8	-10	-12	-16	-16	-16	-16	-14	-15	-17	-17	-15	-10	-8	-6
27	-2	3	2	-2	1	3	1	-2	-4	-4	-4	-6	-4	1	3	2	-1	-6	-9	-12	-10	-5	-2	-1
28	3	5	5	7	7	11	12	10	5	6	10	10	3	-3	-10	-10	-9	-6	-1	2	5	9	9	9
29	9	12	14	13	10	-1	-8	5	8	7	-2	-7	-3	-6	-14	-14	-10	-8	-8	-19	-24	-31	-30	-23
30	-20	-17	-13	-14	-11	-12	-16	-17	-16	-12	-14	-16	-21	-27	-27	-25	-25	-29	-23	-18	-16	-13	-7	-4
31	-3	-10	-12	-24	-21	-31	-29	-23	-33	-35	-37	-31	-34	-40	-43	-42	-41	-39	-36	-37	-33	-30	-32	-31

## HOURLY EQUATORIAL DST VALUES

SEPTEMBER 1962

DAY	UNIT=GAMMAS																						G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-27	-18	-11	-10	-11	-14	-26	-38	-45	-38	-34	-29	-24	-27	-30	-34	-38	-35	-29	-27	-38	-36	-33	-24
2	-19	-13	-17	-17	-16	-9	-17	-22	-17	-22	-20	-23	-27	-31	-33	-37	-33	-39	-47	-55	-41	-40	-30	-26
3	-26	-25	-27	-20	-14	-19	-14	-14	-18	-14	-13	-11	-2	-5	-13	-15	-21	-31	-45	-31	-46	-49	-45	-36
4	-31	-26	-23	-32	-25	-21	-31	-35	-38	-32	-36	-38	-36	-32	-35	-42	-35	-29	-33	-30	-26	-27	-25	-26
5	-24	-22	-20	-17	-15	-17	-18	-19	-26	-33	-28	-24	-22	-21	-31	-43	-47	-47	-45	-39	-34	-32	-33	-37
6	-23	-26	-29	-29	-23	-23	-21	-20	-22	-22	-26	-32	-30	-27	-30	-35	-42	-49	-50	-48	-50	-47	-46	-37
7	-25	-23	-22	-19	-17	-13	-14	-17	-29	-30	-30	-26	-20	-25	-30	-32	-31	-31	-30	-31	-28	-24	-24	-26
8	-19	-22	-28	-22	-19	-16	-17	-27	-43	-40	-34	-32	-31	-30	-34	-34	-28	-29	-32	-32	-28	-24	-26	-24
9	-23	-15	-14	-12	-9	-7	-7	-10	-13	-15	-20	-21	-21	-23	-24	-26	-27	-31	-34	-35	-37	-32	-32	
10	-24	-17	-10	-13	-16	-18	-13	-18	-23	-22	-24	-18	-11	-8	-10	-12	-15	-19	-21	-22	-20	-16	-14	-10
11	-6	1	4	1	0	4	4	-4	-7	-7	-14	-8	-5	-5	-10	-14	-15	-16	-13	-5	-3	-5	-5	3
12	14	13	13	14	20	1	-9	-61	-55	-46	-46	-46	-43	-49	-54	-57	-61	-76	-86	-95	-74	-61	-56	-42
13	-30	-28	-29	-32	-31	-29	-31	-33	-33	-26	-25	-31	-31	-33	-39	-46	-53	-55	-57	-45	-31	-26	-27	-25
14	-20	-16	-16	-15	-18	-17	-16	-25	-25	-22	-25	-28	-30	-29	-29	-29	-31	-34	-35	-33	-31	-23	-18	-13
15	-4	0	-2	-8	-10	-7	-6	-19	-16	-14	-14	-14	-13	-13	-14	-13	-13	-13	-26	-33	-30	-23	-19	-14
16	-6	-3	-4	-9	-9	-8	-9	-11	-14	-13	-17	-19	-23	-25	-22	-18	-19	-17	-16	-23	-21	-16	-23	-18
17	-9	-1	-6	-4	-2	2	2	-2	-6	-10	-12	-14	-12	-12	-10	-8	-6	-9	-15	-15	-14	-15	-15	-9
18	-3	1	3	0	2	4	4	-1	-5	-5	-1	-2	-1	-2	-6	-7	-6	-7	-8	-7	-2	-1	-4	-2
19	10	17	14	3	-16	-39	-45	-37	-35	-32	-26	-27	-28	-29	-32	-33	-32	-35	-55	-38	-37	-45	-36	-32
20	-34	-26	-25	-25	-25	-22	-20	-23	-21	-19	-14	-18	-17	-20	-24	-23	-21	-18	-17	-18	-19	-19	-21	-19
21	-16	-12	-9	-9	-11	-7	-12	-13	-16	-18	-16	-12	-15	-11	-21	-24	-26	-23	-22	-23	-22	-17	-17	-14
22	-15	-15	-11	-13	-13	-14	-12	-11	-14	-11	-7	-5	-5	-8	-13	-20	-26	-24	-27	-26	-14	-13	-11	-10
23	-6	-2	-4	-12	-9	-15	-14	-9	-12	-13	-11	-12	-9	-9	-12	-17	-18	-17	-17	-16	-14	-15	-16	-12
24	-7	-8	-10	-9	-7	-6	-2	-2	-4	-7	-10	-13	-12	-11	-11	-12	-12	-15	-14	-16	-22	-20	-16	-10
25	-5	-0	0	-0	2	6	7	5	9	14	13	7	1	-2	-4	-7	-5	-5	0	3	3	5	12	-3
26	-33	-55	-56	-44	-49	-47	-49	-41	-39	-32	-28	-29	-27	-22	-29	-43	-35	-30	-32	-41	-37	-36	-33	-27
27	-18	-10	-11	-15	-17	-18	-20	-19	-20	-21	-22	-21	-20	-18	-19	-24	-29	-28	-28	-28	-27	-27	-20	-17
28	-14	-11	-12	-10	-9	-8	-10	-13	-12	-10	-12	-12	-11	-10	-9	-9	-5	-6	-5	-6	-8	-22	-28	-28
29	-26	-24	-19	-19	-20	-20	-16	-22	-23	-18	-16	-22	-26	-23	-24	-27	-33	-43	-57	-61	-67	-72	-75	-67
30	-60	-56	-51	-54	-56	-49	-44	-42	-38	-34	-27	-25	-24	-20	-19	-21	-22	-22	-24	-24	-24	-23	-23	-26

## HOURLY EQUATORIAL DST VALUES

OCTOBER 1962

	UNIT=GAMMAS																							G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-26	-15	-14	-11	-15	-10	-25	-33	-30	-28	-34	-30	-33	-32	-34	-40	-49	-48	-48	-69	-60	-61	-44	-41	
2	-42	-34	-31	-32	-30	-28	-20	-28	-24	-16	-19	-22	-30	-35	-33	-36	-43	-47	-44	-41	-38	-37	-37	-33	
3	-29	-22	-20	-20	-21	-20	-20	-19	-28	-28	-29	-29	-27	-28	-31	-26	-28	-29	-27	-24	-26	-30	-28	-30	
4	-29	-30	-29	-29	-26	-23	-18	-22	-21	-21	-23	-26	-27	-25	-25	-26	-31	-35	-35	-33	-30	-32	-30	-25	
5	-21	-17	-13	-11	-9	-9	-5	-1	-2	0	-3	2	4	2	1	-3	-8	-19	-35	-56	-46	-36	-31	-30	
6	-35	-37	-34	-34	-40	-35	-25	-24	-22	-20	-19	-19	-22	-20	-27	-24	-21	-23	-23	-23	-21	-25	-27	-22	
7	-20	-15	-17	-21	-21	-18	-18	-17	-11	-10	-8	-5	-7	-8	-8	-9	-15	-21	-20	-8	6	-3	-2	-5	
8	-16	-28	-21	-18	-18	-20	-17	-12	-9	-13	-20	-18	-18	-12	-9	-12	-20	-33	-35	-35	-30	-19	-29	-28	
9	-43	-25	-24	-23	-18	-22	-17	-20	-26	-20	-14	-15	-24	-32	-30	-28	-24	-25	-28	-26	-26	-28	-20	-20	
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11	-18	-16	-19	-11	-27	-32	-24	-19	-16	-12	-17	-18	-18	-20	-14	-14	-21	-24	-23	-32	-32	-25	-22	-16	
12	-18	-13	-10	-14	-16	-17	-16	-16	-14	-14	-10	-7	-9	-10	-12	-14	-11	-9	-9	-9	-8	-6	-4	-2	
13	-1	-0	-1	-2	-3	-6	-7	-7	-9	-10	-19	-25	-23	-21	-20	-18	-16	-20	-21	-21	-24	-27	-27	-25	
14	-29	-20	-17	-20	-17	-27	-35	-36	-26	-19	-24	-32	-31	-29	-28	-21	-20	-38	-49	-42	-38	-30	-30	-22	
15	-17	-12	-16	-17	-20	-20	-21	-23	-23	-20	-20	-21	-21	-19	-20	-19	-15	-14	-16	-16	-16	-14	-14	-17	
16	-15	-14	-13	-12	-11	-12	-13	-9	-6	-4	3	-25	-28	-22	-18	-16	-18	-23	-27	-19	-17	-18	-24	-21	
17	-21	-17	-16	-18	-19	-21	-21	-19	-17	-19	-17	-16	-15	-13	-12	-10	-9	-9	-7	-8	-7	-7	-9	-17	
18	-21	-30	-26	-23	-22	-18	-17	-17	-14	-11	-7	-3	-3	-4	-6	-9	-17	-21	-17	-12	-10	-8	-7	-0	
19	-4	-3	-0	1	3	3	1	3	1	-16	-8	-3	-9	-10	-14	-19	-12	-11	-16	-27	-31	-23	-28	-26	
20	-22	-21	-19	-18	-18	-16	-14	-11	-10	-8	-8	-9	-9	-10	-9	-6	-7	-5	-7	-5	-2	0	-10	-16	
21	-14	-10	-7	-3	-7	-10	-11	-13	-12	-8	-4	-3	-4	-2	-4	-8	-15	-23	-28	-30	-24	-19	-20	-21	
22	-20	-18	-19	-22	-25	-26	-26	-21	-17	-12	-18	-15	-1	4	-5	-9	-12	-17	-27	-37	-44	-43	-19	-19	
23	-22	-21	-14	-11	-10	-11	-11	-14	-12	-11	-12	-15	-13	-13	-13	-19	-23	-25	-22	-24	-33	-25	-20	-12	
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25	-28	-23	-22	-27	-21	-26	-24	-23	-21	-22	-16	-16	-24	-28	-20	-18	-22	-34	-34	-42	-51	-31	-33	-32	
26	-29	-29	-29	-20	-20	-18	-23	-26	-31	-36	-32	-32	-37	-42	-48	-54	-52	-59	-56	-67	-67	-49	-40	-40	
27	-40	-39	-37	-32	-27	-27	-32	-29	-25	-26	-25	-27	-33	-30	-29	-28	-28	-36	-37	-40	-35	-30	-27	-26	
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30	-15	-13	-17	-20	-24	-23	-19	-17	-23	-24	-21	-21	-24	-21	-20	-25	-24	-24	-23	-25	-26	-20	-19	-18	
31	31	-17	-15	-16	-18	-18	-19	-19	-20	-21	-22	-22	-20	-19	-17	-16	-18	-17	-16	-17	-15	-17	-18	-14	-15

## HOURLY EQUATORIAL DST VALUES

NOVEMBER 1962

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-16	-16	-16	-15	-13	-11	-10	-11	-11	-15	-18	-20	-18	-15	-13	-15	-17	-21	-17	-12	-13	-23	-27	-25
2	-23	-21	-18	-14	-13	-12	-8	-6	-8	-9	-12	-16	-12	-12	-4	-2	-5	-12	-18	-21	-24	-28	-44	-39
3	-35	-32	-29	-26	-25	-22	-22	-21	-20	-16	-14	-18	-24	-26	-24	-22	-17	-10	-12	-21	-25	-29	-23	-17
4	-14	-13	-13	-14	-12	-11	-13	-15	-18	-18	-15	-14	-19	-24	-26	-27	-25	-25	-21	-30	-40	-24	-15	-12
5	-12	-9	-6	-6	-10	-18	-24	-29	-25	-22	-21	-21	-22	-17	-13	-14	-14	-13	-13	-10	-7	-8	-7	-7
6	-2	4	14	7	-0	0	-2	-3	-5	-4	-4	-5	-6	-6	-3	-6	-8	-23	-15	-13	-31	-17	-16	-18
7	-22	-16	-10	-17	-14	-11	-6	-4	-8	-10	-13	-20	-18	-18	-14	-10	-10	-11	-12	-11	-10	-10	-14	-9
8	-6	-6	-6	-8	-10	-7	-3	-2	-5	-7	-9	-13	-14	-10	-6	-8	-5	-4	-5	-8	-8	-7	-7	-10
9	-13	-13	-10	-12	-12	-10	-5	-1	-3	-3	-4	-4	-6	-5	-1	1	0	0	-2	-5	-9	-9	-1	
10	1	-1	-4	-4	-3	-2	-0	-1	-2	-1	2	4	4	3	0	-2	-2	-1	1	4	7	3	2	3
11	4	5	6	5	5	3	2	-1	-3	-2	-6	-4	-5	-7	-10	-10	-9	-12	-13	-14	-14	-12	-13	-13
12	-9	-10	-11	-12	-10	-10	-8	-8	-7	-8	-8	-9	-9	-9	-8	-9	-7	-5	-3	-4	-6	-6	-8	
13	-8	-6	-5	-7	-8	-6	-3	-4	-4	-1	5	6	8	10	9	8	8	6	2	-0	-3	-3	-2	-4
14	-5	-4	-2	-2	-1	1	1	0	6	9	10	8	8	7	2	-1	3	3	-2	3	-3	-1	0	
15	1	0	2	1	-3	-10	-0	-0	-3	-2	3	1	-17	-36	-29	-26	-28	-31	-40	-39	-47	-42	-51	-58
16	-44	-46	-39	-36	-39	-32	-30	-33	-36	-36	-36	-39	-36	-31	-38	-38	-43	-38	-39	-40	-32	-30	-33	-26
17	-22	-24	-24	-24	-23	-20	-16	-17	-21	-25	-27	-27	-29	-28	-31	-28	-21	-17	-16	-16	-14	-15	-15	-16
18	-13	-10	-9	-10	-9	-9	-7	-6	-7	-9	-12	-17	-18	-16	-14	-13	-14	-14	-13	-14	-12	-10	-11	-11
19	-10	-10	-8	-7	-3	-1	1	1	-2	-6	-8	-9	-11	-12	-11	-10	-5	-3	-6	-10	-8	-6	-5	-3
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22	-13	-25	-36	-39	-36	-41	-34	-29	-37	-39	-37	-40	-44	-50	-50	-46	-36	-39	-36	-38	-41	-27	-27	-26
23	-27	-24	-22	-25	-28	-26	-26	-24	-28	-34	-30	-29	-28	-28	-28	-27	-25	-16	-15	-19	-15	-19	-20	-19
24	-15	-16	-18	-17	-15	-12	-12	-14	-17	-23	-19	-21	-26	-29	-27	-20	-17	-19	-21	-19	-17	-12	-11	-11
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26	-12	-10	-13	-14	-9	-5	-4	-5	-11	-16	-17	-19	-18	-17	-14	-15	-17	-18	-17	-17	-16	-15	-11	-9
27	-9	-8	-12	-16	-16	-13	-10	-10	-15	-18	-17	-14	-10	-6	-5	-11	-11	-12	-9	-11	-8	-7	-8	-8
28	-8	-13	-14	-14	-14	-11	-12	-14	-18	-23	-19	-18	-11	-9	-10	-13	-15	-12	-7	-3	-3	-4	-4	-4
29	-4	-7	-10	-10	-7	-0	5	6	1	-4	-7	-9	-9	-4	-4	-8	-6	-11	-24	-15	-9	-1	6	8
30	-2	-23	-23	-34	-32	-34	-33	-43	-45	-41	-46	-37	-37	-39	-39	-32	-30	-29	-26	-26	-31	-31	-28	-24

## HOURLY EQUATORIAL DST VALUES

DECEMBER 1962

	UNIT=GAMMAS																								G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
DAY																										
1	-26	-27	-27	-28	-25	-21	-19	-22	-22	-26	-24	-20	-16	-14	-16	-20	-19	-18	-20	-15	-16	-15	-15	-14	-15	
2	-15	-14	-15	-16	-17	-15	-13	-11	-12	-14	-17	-19	-20	-20	-17	-14	-11	-10	-10	-10	-9	-8	-7	-7		
3	-9	-11	-12	-14	-11	-8	-3	-1	-3	-5	-8	-9	-5	-2	-1	-2	-2	-6	0	5	8	11	12	12		
4	12	11	16	26	32	31	24	15	14	6	8	4	-3	-0	-11	-30	-44	-41	-30	-26	-26	-24	-22	-30		
5	-23	-24	-23	-21	-18	-16	-16	-15	-20	-23	-25	-24	-22	-23	-23	-22	-20	-16	-13	-11	-11	-12	-13	-15		
6	-14	-12	-13	-13	-14	-13	-10	-8	-9	-9	-9	-7	-8	-6	-4	-2	-2	-1	-1	-3	-5	-8	-9	-7		
7	-4	-4	-5	-6	-2	3	4	3	-1	-4	-0	3	4	3	3	1	0	-1	-3	-7	-6	-1	4	9		
8	9	9	10	7	3	2	1	2	-2	-9	-8	-6	-6	-5	-3	-5	-8	-9	-11	-15	-18	-17	-16	-9		
9	-9	-16	-19	-20	-11	-7	-6	-5	-5	-8	-5	-4	1	6	8	7	7	9	9	8	13	13	10	11		
10	7	3	4	4	6	9	10	10	7	2	2	4	3	0	0	-4	-9	-13	-14	-12	-11	-16	-17	-17		
11	-16	-20	-21	-19	-25	-31	-36	-38	-31	-26	-20	-17	-15	-12	-12	-17	-35	-48	-62	-38	-39	-50	-45	-40		
12	-37	-38	-35	-28	-27	-29	-33	-33	-31	-26	-22	-22	-24	-20	-17	-13	-20	-24	-22	-26	-27	-24	-28	-33		
13	-34	-30	-23	-25	-29	-31	-29	-25	-21	-25	-28	-28	-21	-19	-17	-20	-18	-14	-12	-4	-9	-21	-17	-21		
14	-24	-26	-28	-18	-14	-14	-13	-16	-16	-18	-22	-29	-30	-21	-20	-19	-19	-21	-17	-13	-6	-10	-12	-15		
15	-23	-25	-30	-23	-20	-23	-19	-20	-21	-19	-18	-18	-18	-15	-11	-11	-14	-17	-19	-22	-21	-19	-18	-19		
16	-19	-15	-11	-10	-9	-8	-8	-1	1	-1	-2	-4	-5	-6	-5	-8	-9	-6	-4	-6	-2	-2	-4	-4		
17	1	2	3	6	6	6	3	-2	-4	-7	-1	4	5	3	4	-12	-38	-35	-46	-62	-73	-81	-79	-88		
18	-71	-83	-53	-42	-51	-52	-54	-51	-54	-59	-51	-52	-53	-48	-52	-51	-50	-62	-73	-85	-76	-66	-55	-64		
19	-67	-59	-49	-45	-38	-40	-45	-37	-40	-34	-36	-36	-35	-33	-36	-43	-41	-50	-49	-35	-41	-41	-34	-41		
20	-41	-38	-40	-39	-32	-30	-32	-31	-35	-36	-38	-29	-23	-27	-33	-34	-47	-41	-47	-47	-45	-31	-40	-43		
21	-35	-35	-38	-30	-31	-30	-36	-38	-34	-32	-34	-33	-33	-33	-32	-39	-38	-41	-37	-35	-29	-27	-29			
22	-32	-32	-30	-27	-28	-27	-27	-22	-25	-21	-19	-21	-21	-23	-26	-26	-22	-20	-22	-20	-20	-22	-21			
23	-23	-24	-23	-20	-18	-20	-21	-19	-16	-18	-17	-16	-17	-15	-16	-17	-19	-18	-16	-13	-12	-12	-12	-16		
24	-19	-19	-17	-15	-13	-12	-13	-12	-10	-8	-10	-18	-21	-17	-14	-19	-16	-15	-15	-13	-11	-10	-9	-10		
25	-9	-9	-8	-9	-8	-9	-12	-11	-6	-3	2	1	-1	-2	-3	-3	-6	-5	-6	-5	-4	-4	-7	-6		
26	-2	3	5	7	4	1	-2	1	13	12	5	-1	-2	-11	-30	-30	-34	-30	-28	-26	-29	-31	-28	-22		
27	-24	-24	-25	-25	-24	-23	-25	-25	-21	-16	-14	-14	-15	-14	-17	-20	-19	-18	-21	-22	-22	-13	-13	-12		
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29	-8	-5	-4	-5	-7	-10	-13	-14	-10	-6	-2	-0	-1	-4	-6	-5	-1	0	-1	-4	-5	-7	-6	-5		
30	-6	-5	-3	-4	-4	-6	-8	-7	-4	-0	3	4	4	8	10	9	9	11	12	9	4	-1	-3	1		
31	4	5	7	8	7	4	1	3	7	5	-5	-6	-4	-0	-3	-13	-17	-13	-10	-8	-7	-8	-9	-8		

## HOURLY EQUATORIAL DST VALUES

JANUARY 1963

	UNIT=GAMMAS																			G.M.T.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-4	-3	-5	-5	-5	-8	-12	-10	-7	-1	1	-4	-7	-9	-10	-12	-13	-11	-10	-12	-11	-14	-18	-13	
2	-11	-11	-10	-9	-8	-7	-5	-2	-0	-1	1	2	1	2	6	8	3	0	2	5	7	5	2	3	
3	4	6	6	8	7	7	6	4	2	5	3	0	1	1	2	1	2	7	9	8	8	7	5	4	
4	2	2	2	3	9	11	10	10	13	17	22	25	25	15	4	-7	-18	-20	-20	-20	-20	-14	-11	-12	
5	-10	-8	-7	-6	-6	-6	-8	-10	-8	-4	-2	-6	-9	-13	-11	-10	-16	-16	-13	-9	-6	-7	-4	-1	
6	-0	-1	-1	1	2	2	-0	2	4	4	4	3	1	1	3	3	4	5	5	5	5	8	6	6	
7	4	1	1	3	5	9	14	16	16	12	8	4	2	2	-3	-4	-14	-23	-15	-11	-9	-8	-8	-9	
8	-9	-10	-9	-8	-6	-6	-7	-6	-5	-7	-7	-8	-9	-10	-9	-5	-6	-6	-7	-5	2	5	6	6	
9	6	5	6	6	6	8	10	9	8	7	6	7	5	1	2	2	2	3	3	4	4	7	8	6	
10	5	5	1	-1	1	4	5	7	8	5	0	0	-2	-4	-7	-7	-7	-8	-6	-4	-3	-2	-3	-4	
11	-2	0	4	8	10	11	14	19	22	21	21	24	27	28	20	13	7	5	-13	-18	-14	-7	-5	-6	
12	-3	-2	1	-1	-0	-0	-1	-2	-3	-9	-12	-10	-8	-8	-6	-2	2	3	6	6	10	20	18	21	
13	14	-6	0	-5	-1	-6	-5	1	8	8	-0	2	-2	-10	-16	-21	-18	-26	-24	-19	-19	-15	-17	-10	
14	-12	-12	-10	-4	-10	-17	-18	-15	-12	-12	-19	-20	-11	-13	-22	-26	-35	-34	-29	-35	-35	-29	-20	-16	
15	-16	-17	-16	-14	-11	-21	-23	-19	-21	-18	-20	-21	-19	-23	-30	-29	-28	-26	-21	-23	-22	-23	-20	-17	
16	-20	-19	-20	-16	-12	-9	-16	-20	-17	-19	-20	-17	-17	-24	-35	-44	-39	-28	-21	-19	-37	-37	-31	-22	
17	-22	-20	-17	-17	-18	-16	-18	-17	-15	-11	-15	-14	-19	-24	-26	-19	-19	-32	-26	-25	-26	-25	-23	-21	
18	-20	-20	-19	-18	-19	-19	-20	-20	-16	-12	-11	-10	-10	-16	-20	-14	-15	-16	-15	-18	-21	-22	-29	-30	
19	-31	-32	-30	-26	-22	-18	-19	-20	-17	-14	-11	-12	-14	-20	-31	-30	-29	-27	-28	-31	-33	-34	-31	-34	
20	-30	-25	-23	-20	-17	-14	-17	-17	-20	-18	-14	-12	-12	-18	-19	-16	-13	-11	-13	-19	-26	-25	-24	-24	
21	-22	-20	-21	-18	-13	-10	-10	-8	-9	-13	-13	-12	-7	-6	-8	-13	-13	-9	-5	-7	-8	-4	-0	-1	
22	-9	-12	-11	-9	-6	-3	-4	-5	-6	-4	1	1	1	0	-3	-7	-8	-7	-9	-14	-14	-13	-8	-7	
23	-8	-7	-5	-6	-3	-6	-6	-6	1	3	2	-2	1	-0	-1	-2	-2	1	-2	-7	-9	-9	-2	-1	
24	-5	-7	-8	-4	1	-1	-3	-4	3	3	1	0	6	9	11	12	15	9	4	-1	-18	-32	-31	-28	
25	-30	-29	-28	-24	-18	-20	-18	-18	-21	-18	-14	-10	-7	-11	-14	-18	-20	-18	-19	-23	-24	-21	-15	-14	
26	-12	-11	-10	-9	-9	-8	-9	-9	-7	-4	-5	-6	-5	-5	-7	-9	-8	-9	-11	-13	-13	-12	-9	-5	
27	-4	-3	-1	-0	1	3	1	-2	-4	-3	-3	-4	-2	0	1	-1	0	1	-1	-2	-3	-2	-2	-1	
28	2	2	4	4	1	-0	-1	-1	-0	-0	0	3	7	6	3	2	2	3	5	4	2	2	3	3	
29	4	4	6	8	10	11	9	8	9	10	10	10	8	10	14	14	14	14	16	16	10	-4	-14	-17	-2
30	-1	-9	-2	-8	-12	-15	-17	-8	-5	-5	-7	-22	-30	-31	-30	-33	-40	-36	-25	-15	-26	-61	-66	-62	
31	-69	-71	-73	-65	-62	-62	-63	-63	-60	-58	-63	-63	-64	-58	-57	-66	-80	-82	-81	-71	-60	-53	-49	-48	

## HOURLY EQUATORIAL DST VALUES

FEBRUARY 1963

	UNIT=GAMMAS																								G.M.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
DAY																										
1	-46	-46	-44	-40	-37	-34	-31	-28	-25	-27	-29	-35	-37	-33	-37	-39	-41	-43	-42	-38	-43	-43	-33	-27		
2	-22	-22	-22	-19	-16	-16	-13	-14	-13	-13	-15	-17	-18	-21	-20	-17	-17	-15	-12	-12	-13	-13	-13	-14		
3	-13	-14	-14	-13	-10	-8	-8	-5	-3	3	6	5	1	-5	-13	-15	-16	-14	-9	-8	-6	-7	-8	-8		
4	-8	-7	-5	-2	2	3	4	5	8	11	11	12	13	10	7	1	-3	-10	-18	-14	-11	-8	-7	-8		
5	-9	-7	-6	-3	1	2	-9	-2	-3	-2	-1	3	5	0	-6	-8	-10	-9	-8	-11	-14	-14	-12	-12		
6	-12	-9	-6	-3	1	-2	-6	-4	1	4	7	10	16	9	2	-0	-3	-1	0	-0	-2	-1	-1	-1		
7	-3	-3	-1	2	2	2	-0	-2	-0	3	8	10	13	11	9	7	7	6	5	3	-0	-3	-4	-3		
8	-5	-6	-5	-4	-2	-0	-2	-3	-4	-3	-1	1	4	5	5	7	9	10	9	5	3	3	5	5		
9	5	7	8	10	11	13	13	12	11	14	16	16	20	25	24	23	27	33	27	29	40	32	30	-10		
10	-56	-76	-68	-67	-63	-61	-60	-52	-43	-46	-44	-39	-43	-46	-41	-39	-40	-41	-49	-51	-47	-37	-42	-34		
11	-31	-29	-29	-29	-28	-26	-23	-25	-20	-19	-22	-21	-20	-17	-18	-25	-26	-17	-14	-17	-18	-23	-22	-16		
12	-14	-15	-11	-18	-19	-20	-19	-25	-20	-14	-12	-13	-12	-14	-15	-13	-13	-11	-12	-19	-20	-19	-17	-19		
13	-16	-17	-18	-15	-12	-15	-16	-18	-19	-19	-19	-18	-20	-18	-17	-24	-32	-25	-21	-30	-31	-24	-23	-24		
14	-26	-25	-23	-20	-17	-15	-16	-18	-12	-10	-5	-3	-5	-11	-15	-17	-16	-12	-10	-7	-8	-8	-9	-7		
15	-10	-12	-13	-11	-9	-9	-9	-11	-12	-12	-9	-14	-15	-21	-21	-15	-15	-16	-17	-14	-14	-15	-15	-14		
16	-15	-14	-12	-10	-7	-8	-9	-10	-6	-4	-4	0	0	-2	-4	-8	-13	-9	-5	-5	-6	-6	-6	-6		
17	-5	-2	-1	-2	-2	-2	-2	-2	-2	-2	-1	3	5	4	3	2	0	-0	4	6	6	4	2	1		
18	3	5	5	6	4	2	3	5	7	6	6	10	13	11	7	2	-1	2	5	11	11	11	11	13		
19	14	12	11	12	10	12	13	12	14	12	12	10	10	13	12	11	9	9	15	20	24	24	21	20		
20	22	19	18	20	18	18	17	9	7	4	8	17	18	17	15	12	13	12	12	8	2	-6	-14	-3		
21	1	2	3	0	-0	-1	-2	-4	-6	-5	0	2	1	-1	-2	-2	-11	-12	-9	-4	-1	-1	-5	-4		
22	-4	-1	-2	-2	-4	-5	-5	-7	-7	-5	-2	2	4	5	3	4	2	-0	-4	-4	-3	-1	1	3		
23	3	4	7	11	11	8	9	5	6	9	11	9	4	3	1	-1	-8	-7	-5	-2	-3	-2	-4	-1		
24	5	7	5	2	1	0	1	1	1	1	-1	1	0	-0	1	5	5	5	5	5	5	7	7	4		
25	4	7	7	5	0	-1	-1	-1	0	1	3	9	10	4	1	-0	-2	2	5	7	6	6	6	5		
26	7	8	9	10	10	8	5	3	2	2	-1	-1	1	-0	-2	-1	-2	-2	1	5	3	0	-1	-0		
27	1	4	5	6	7	7	8	8	9	10	11	10	11	11	10	10	9	7	5	5	5	4	2	5		
28	7	8	8	9	7	5	6	10	12	11	11	12	12	11	6	4	7	8	8	9	10	11	12	1		

## HOURLY EQUATORIAL DST VALUES

MARCH 1963

	G.M.T.																								
UNIT=GAMMAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-9	-14	-18	-21	-20	-14	-20	-25	-23	-21	-19	-16	-11	-6	-7	-7	-11	-9	-6	-3	-4	-11	-14	-16	
2	-15	-14	-11	-8	-4	-4	-3	-2	-6	-7	-1	2	2	1	0	-2	-6	-1	5	2	3	2	-1	3	
3	-0	2	3	3	6	1	0	10	11	-C	1	-4	-7	1	-1	-3	-4	2	7	6	3	-3	-1	1	
4	1	0	1	3	4	4	4	4	5	6	7	7	8	6	3	1	-2	-3	-1	0	1	-1	-2	-1	
5	-2	-1	0	1	2	-1	-1	2	3	3	6	7	7	3	1	-0	-2	-3	-1	-1	-4	-4	-3	-2	
6	-2	0	-1	-2	-6	-6	-2	2	4	4	4	4	4	3	3	2	-2	-9	-11	-15	-13	-10	-10	-6	
7	-5	-4	-4	-0	-1	-6	-4	-1	2	5	6	5	3	2	5	8	10	16	26	19	4	3	-3	-13	
8	-17	-14	-14	-13	-11	-2	-8	-15	-22	-16	-5	-12	-10	-10	-12	-24	-22	-30	-22	-23	-30	-21	-21	-16	
9	-10	-17	-20	-17	-19	-16	-16	-9	-4	-1	1	0	0	-2	-3	-5	-8	-10	-7	-8	-10	-13	-14	-11	
10	-11	-7	-12	-17	-18	-21	-16	-18	-15	-5	-9	-10	-15	-29	-41	-40	-36	-37	-33	-31	-27	-29	-30	-34	
11	-26	-29	-32	-28	-27	-25	-24	-19	-20	-21	-19	-15	-15	-18	-24	-28	-28	-27	-26	-25	-25	-22	-20	-13	
12	-13	-16	-17	-19	-18	-15	-14	-14	-14	-12	-15	-16	-18	-18	-21	-28	-27	-25	-25	-23	-22	-19	-17	-15	
13	-13	-13	-11	-10	-11	-9	-7	-6	-6	-11	-14	-12	-11	-14	-21	-18	-16	-16	-17	-19	-19	-19	-18		
14	-14	-12	-11	-9	-8	-7	-7	-6	-6	-7	-7	-6	-7	-8	-7	-6	-6	-7	-9	-10	-11	-11	-10	-8	
15	-7	-6	-5	-4	-4	-7	-7	-6	-9	-8	-7	-6	-6	-7	-9	-10	-10	-10	-10	-9	-7	-6	-5	-4	
16	-1	-1	0	2	2	2	2	2	3	5	4	5	8	8	5	2	2	2	3	5	4	3	1	-1	
17	-1	-1	1	3	3	5	6	9	9	6	4	5	6	5	1	-0	-3	-4	-7	-9	-11	-16	-12	-14	
18	-13	-10	-8	-9	-7	-1	-1	-3	-7	-7	-4	1	4	2	-2	-6	-6	-6	-1	-2	-7	-12	-16	-13	
19	-11	-7	-6	-7	-9	-12	-10	-3	1	0	-3	-5	-4	-7	-9	-8	-7	-8	-10	-16	-16	-15	-12	-8	
20	-5	-5	-7	-5	-7	-6	-2	-1	1	1	0	3	6	6	5	6	7	10	11	10	6	-4	-9	-5	
21	-3	-2	-2	-2	-2	-2	-2	-1	0	-C	-2	-3	-4	-6	-9	-8	-8	-10	-11	-9	-7	-4	-3	-1	
22	1	3	2	2	1	1	3	5	7	6	6	7	5	6	9	9	11	13	13	14	12	10	9	11	
23	12	9	7	7	9	10	16	9	13	17	14	13	10	3	-6	-3	0	4	11	9	1	-3	-4	-3	
24	-2	-1	-2	-2	-1	-2	-2	-1	-1	1	0	-2	-5	-2	0	-0	0	-1	-1	1	3	-0	-2	2	
25	5	7	7	4	1	2	-1	-1	1	4	6	9	9	7	4	5	5	4	7	8	9	10	10	9	
26	8	7	6	6	5	4	4	4	2	1	0	-1	-0	-0	0	0	-0	-1	1	-0	-1	4	5	3	
27	6	6	6	5	2	2	2	2	1	-1	-1	2	4	3	2	2	1	-0	-1	-1	4	9	9	9	
28	10	9	10	11	13	16	17	15	15	15	15	16	17	15	14	15	15	16	15	14	14	17	19	17	13
29	15	15	17	15	18	19	20	19	17	11	7	2	2	0	-1	0	2	4	6	8	8	9	10	9	
30	9	9	6	4	2	2	3	2	1	0	-1	4	5	4	3	3	1	0	1	6	9	9	9	9	
31	10	12	10	7	5	3	2	-1	-1	-2	-1	2	4	4	2	1	3	3	4	8	12	23	24	17	

## HOURLY EQUATORIAL DST VALUES

APRIL 1963

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	7	-0	-4	-2	-5	-14	-22	-22	-19	-17	-9	-4	1	1	2	1	-6	-10	-10	-6	0	5	5	5
2	6	6	3	0	-1	-2	-2	1	1	1	0	1	-0	-0	-3	-1	1	-1	-9	-8	-6	-4	-3	-1
3	2	2	2	2	1	1	-1	-5	-6	-1	4	12	19	19	13	11	5	0	2	6	10	11	13	13
4	13	11	7	6	7	8	17	10	11	15	20	22	23	15	13	6	4	9	-1	-2	7	13	10	0
5	-1	-22	-23	-27	-27	-17	-21	-22	-19	-16	-20	-15	-10	-12	-17	-22	-23	-20	-19	-9	-9	-11	-12	-13
6	-13	-13	-15	-11	-9	-10	-11	-11	-14	-17	-15	-10	-3	-4	-9	-6	-8	-14	-13	-11	-8	-10	-8	-11
7	-10	-5	-5	-8	-9	-7	-8	-11	-15	-15	-14	-11	-8	-6	-9	-16	-18	-10	-6	-2	1	0	-2	-4
8	-1	-0	-1	-3	-5	-4	-2	-3	-3	-2	-2	-2	1	0	2	1	-1	-2	-7	-3	1	2	-0	-0
9	-1	-0	-3	-7	-9	-10	-13	-10	-8	-9	-10	-6	-2	-2	1	4	1	-7	-5	-2	-2	-4	-5	-3
10	-1	-1	-3	-4	-4	-4	-3	-5	-4	-3	-6	-8	-7	-7	-7	-6	-4	-2	-1	-4	-1	-1	2	4
11	6	8	4	4	4	4	3	1	-2	-4	-10	-8	-5	-5	-4	-4	-3	-1	1	3	5	6	6	6
12	4	9	10	8	8	8	4	7	4	3	-1	4	7	8	4	3	3	0	1	0	-6	-11	-13	-7
13	-6	-4	-4	-4	-4	-2	-0	-2	-6	-6	-8	-7	-5	-5	-5	-8	-14	-19	-29	-27	-23	-26	-31	-31
14	-26	-24	-20	-15	-10	-6	-7	-8	-10	-9	-5	-5	1	0	-7	-16	-16	-6	-0	-4	-6	-1	-5	-9
15	-19	-24	-17	-21	-23	-22	-24	-26	-31	-30	-25	-18	-15	-15	-12	-12	-11	-11	-10	-9	-6	-7	-5	-7
16	-4	-4	-10	-10	-9	-7	-9	-10	-11	-10	-10	-5	0	1	3	3	1	-1	2	7	9	10	7	1
17	-4	-7	-1	-1	-6	-8	-10	-11	-10	-8	-1	0	3	3	4	6	8	4	1	5	10	13	12	8
18	5	4	3	2	0	1	2	2	-3	-2	4	6	8	9	8	9	6	-4	-11	-8	-11	-8	-10	-6
19	0	-2	-5	-4	-1	-6	-2	-5	-3	2	12	16	16	17	19	20	14	2	-1	4	6	7	5	5
20	12	8	5	4	2	7	0	-3	1	2	6	9	11	2	-4	-10	-7	-8	-7	-4	-4	-2	-2	-0
21	-0	-0	-1	-1	-3	-3	-2	-3	-3	-1	4	5	4	0	-4	-4	-4	-4	-7	-3	-2	-5	-7	-7
22	-7	-9	-14	-11	-7	-6	-6	-6	-4	-6	7	5	5	4	0	-3	-6	-10	-9	-11	-9	-5	-8	-8
23	-10	-12	-17	-23	-25	-25	-26	-28	-26	-27	-23	-19	-18	-19	-21	-20	-18	-16	-14	-13	-9	-8	-7	-7
24	-8	-7	-6	-6	-6	-5	-4	-4	-4	-4	-1	-2	0	1	4	5	3	6	9	12	13	12	11	8
25	8	11	13	10	11	13	13	13	10	10	10	9	10	11	14	15	12	10	12	14	15	13	7	7
26	9	5	0	-1	2	0	1	5	6	7	9	9	9	8	7	5	2	4	5	6	13	15	12	14
27	13	12	11	9	5	-1	-1	-3	-10	-8	-3	1	-2	2	6	6	6	1	-3	-11	-1	4	4	-0
28	-2	0	3	5	5	6	7	8	13	15	15	17	15	16	20	22	19	16	15	11	9	8	9	10
29	10	10	9	11	12	13	11	9	10	9	8	10	15	17	18	18	16	14	11	12	14	17	17	15
30	14	12	12	11	11	11	10	11	12	17	20	21	20	20	25	47	59	52	43	17	-16	-5	6	7

## HOURLY EQUATORIAL DST VALUES

MAY 1963

	UNIT=GAMMAS																				G.M.T.			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-3	-6	-25	-40	-40	-32	-27	-30	-24	-23	-18	-16	-12	-12	-10	-13	-21	-22	-21	-18	-15	-17	-11	-15
2	-20	-18	-17	-17	-14	-12	-11	-9	-9	-10	-12	-13	-10	-10	-12	-13	-19	-18	-18	-13	-4	-4	11	15
3	13	2	1	-1	-7	-6	-4	2	5	2	0	0	-4	-6	-6	-8	-12	-15	-12	-7	-7	-9	-7	-13
4	-12	-11	-19	-19	-17	-17	-18	-22	-23	-17	-18	-16	-15	-19	-25	-27	-26	-23	-19	-18	-19	-20	-13	-12
5	-18	-19	-17	-16	-10	-15	-13	-9	-12	-13	-7	-1	0	-3	-7	-9	-13	-15	-9	-3	-1	-2	-2	-2
6	-6	-10	-7	-10	-6	-13	-15	-14	-11	-6	-1	1	2	3	3	-1	-3	-1	2	4	0	-3	-3	-3
7	-0	-0	-1	-1	-3	-5	-1	4	3	0	5	7	5	3	2	3	2	1	-1	1	4	4	3	2
8	-1	-5	-4	-4	-3	-1	-1	0	-2	4	3	7	3	-6	-5	-3	-4	-2	4	10	3	4	2	5
9	1	5	9	16	13	10	0	-6	-9	-11	-11	-10	-13	-11	-6	-4	-7	-9	-8	-14	-18	-12	-15	-14
10	-14	-13	-13	-14	-14	-11	-11	-16	-12	-10	-5	-2	-5	-13	-17	-20	-24	-14	-4	-2	-1	-5	-13	-16
11	-13	-19	-18	-15	-11	-14	-13	-8	-9	-6	-5	-4	-5	-4	-7	-12	-13	-11	-8	-6	-5	-6	-9	-9
12	-12	-10	-10	-9	-9	-9	-7	-5	-4	-4	-0	1	-0	2	-6	-8	-4	0	-4	-8	-8	-13	-15	-11
13	-13	-11	-7	-5	-12	-14	-16	-17	-10	-18	-19	-11	-19	-23	-27	-25	-24	-21	-17	-11	-12	-14	-11	-14
14	-19	-19	-17	-12	-13	-17	-14	-11	-16	-14	-14	-13	-13	-14	-13	-11	-11	-13	-8	-8	-9	-7	-6	-7
15	-10	-10	-9	-11	-9	-9	-11	-9	-8	-8	-8	-10	-15	-17	-18	-18	-17	-17	-15	-16	-15	-14	-17	-19
16	-17	-11	-10	-11	-11	-11	-9	-5	-4	-7	-7	-6	-4	-6	-8	-8	-9	-7	-5	-5	-6	-4	-1	-2
17	-3	-4	-5	-3	-2	1	3	7	10	9	6	3	3	7	11	12	8	0	4	-0	-1	-0	-1	-3
18	-5	-2	-2	-1	1	1	-1	1	3	4	2	-1	4	8	8	6	3	-2	-1	-1	1	1	3	6
19	8	7	7	10	11	9	8	8	8	7	7	6	3	-1	1	2	-9	-9	1	2	-1	-11	-17	-24
20	-30	-31	-21	-11	-11	-11	-11	-5	-1	1	7	7	1	-3	-4	-3	-1	2	0	2	3	3	4	5
21	2	1	2	3	4	6	9	11	9	9	11	14	15	16	14	14	12	11	7	7	4	5	9	12
22	12	10	7	7	6	5	6	7	9	10	11	8	6	6	7	8	8	11	13	12	10	6	6	7
23	5	5	8	11	10	11	14	14	14	16	16	16	18	14	13	14	12	12	8	7	11	12	11	13
24	16	16	16	13	12	12	11	10	11	16	11	11	11	12	14	17	19	21	20	19	20	22	23	24
25	24	25	24	26	33	38	37	36	37	31	32	27	20	16	10	11	10	8	8	6	7	8	7	5
26	3	-3	-7	-11	-9	-4	-1	1	4	6	6	8	7	4	5	4	3	6	9	8	7	4	6	
27	4	2	1	2	3	6	4	6	9	10	9	5	3	5	8	11	10	11	16	23	30	30	20	17
28	17	16	4	-4	-5	-2	0	-5	-2	-5	-8	-9	-6	-5	-3	-3	-1	-0	2	5	1	-0	1	3
29	-1	-6	-4	-13	-16	-9	-11	-12	-13	-12	-9	-10	-11	-10	-7	-6	-4	-1	-0	-2	-0	-1	-2	-4
30	-5	-8	-6	-12	-13	-11	-13	-13	-11	-9	-9	-6	-5	-5	-8	-7	-9	-9	-10	-9	-6	-5	-8	-7
31	-4	-4	-4	-5	-2	-2	-3	-3	-4	0	1	-0	-1	1	1	-1	0	10	15	10	-1	-9	-13	-9

## HOURLY EQUATORIAL DST VALUES

JUNE 1963

	UNIT=GAMMAS																								G.M.T.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-6	-2	-4	-5	-4	-1	-3	0	3	4	2	1	5	10	9	3	-3	-6	-7	-6	-7	-10	-10	-8	
2	-4	-5	-7	-8	-8	-5	1	-4	-1	1	1	-2	-7	-11	-9	-6	-2	2	0	-2	3	3	4	5	
3	3	0	-2	-1	-3	-4	-1	-1	-1	2	2	1	3	2	-2	-1	0	1	1	1	2	1	3	6	
4	6	3	0	-2	-1	-1	0	2	3	4	4	2	0	-2	-3	2	0	2	5	7	9	10	8	9	
5	7	5	3	1	4	2	2	2	3	4	7	11	13	12	13	12	11	12	12	9	8	7	7	9	
6	11	11	12	13	15	14	16	18	18	20	24	27	31	36	45	55	58	55	54	34	17	-1	-17	-32	
7	-61	-82	-80	-85	-81	-80	-72	-60	-55	-47	-39	-39	-46	-48	-46	-49	-50	-41	-40	-36	-31	-31	-24	-25	
8	-23	-24	-25	-23	-26	-23	-20	-21	-20	-18	-17	-18	-16	-13	-15	-16	-15	-14	-13	-17	-20	-19	-16	-19	
9	-24	-17	-19	-21	-16	-16	-15	-15	-15	-11	-10	-14	-16	-16	-18	-21	-20	-18	-14	-12	-9	-9	-10	-12	
10	-9	-11	-14	-14	-11	-7	-7	-6	-4	-3	-5	-8	-9	-5	-1	-0	-4	-6	-2	1	3	0	1	1	
11	1	0	-1	-1	-5	1	2	4	5	5	4	4	3	6	8	11	13	9	4	2	3	5	7	8	
12	8	6	1	-3	-4	-4	-4	-2	-0	2	3	2	2	1	0	1	-0	0	1	5	5	4	4	3	
13	1	-1	-0	-4	-3	1	2	1	-0	-3	-7	-7	-5	-6	-3	-2	1	4	2	1	2	4	5	4	
14	1	0	-2	-2	-0	1	3	3	4	7	8	1	-1	1	2	3	6	6	4	2	1	2	4		
15	7	6	6	4	-1	-5	-4	-9	-5	-4	-3	-2	-2	-3	-5	-4	-1	2	3	-0	-2	-6	1	3	
16	4	4	3	3	2	3	3	1	-0	-1	-1	-2	-3	-3	-3	-1	-1	-3	-1	1	6	9	9	5	
17	-1	-3	-2	-1	3	5	3	2	1	1	-4	-6	-9	-13	-18	-25	-30	-34	-36	-35	-31	-25	-22	-18	
18	-17	-14	-14	-15	-22	-22	-16	-14	-13	-8	-1	3	0	-13	-2	0	-10	-22	-33	-44	-51	-53	-52	-51	
19	-42	-31	-28	-25	-27	-24	-20	-14	-10	-5	-5	-5	-2	4	8	10	11	4	-1	-8	-2	-1	-0	-7	
20	-13	-15	-24	-21	-17	-16	-22	-16	-14	-14	-15	-9	-4	-3	-2	-8	-14	-15	-15	-12	-9	-5	-2	-4	
21	-0	-5	-7	-9	-7	-4	-5	-4	-4	-4	-4	-0	8	14	13	11	6	1	0	0	3	6	6	7	
22	4	3	1	0	2	4	2	-0	-1	-1	-1	-3	-3	-4	-2	-2	2	5	4	2	2	3	-2	-3	
23	-1	2	5	5	4	5	6	4	5	5	5	9	11	13	15	13	9	10	11	10	7	5	6	7	
24	10	11	11	10	11	11	12	15	17	14	15	14	20	25	19	13	10	13	16	15	13	12	13	14	
25	16	15	14	3	-0	-7	-3	-1	-3	-1	-3	-5	-5	-4	-2	4	10	15	17	10	-4	-32	-27	-38	
26	-30	-25	-25	-21	-21	-22	-19	-21	-15	-12	-11	-7	-5	-8	-15	-19	-14	-12	-8	-10	-7	-4	-2	-5	
27	-4	-5	-9	-4	-5	-9	-9	-12	-11	-7	-4	-1	-1	-5	-8	-9	-9	-11	-17	-18	-10	-2	-3	-7	
28	-8	-4	1	4	4	-0	-3	-2	2	3	1	4	6	6	-1	-7	-5	-8	-9	-9	-8	-7	-6	-7	
29	-7	-3	-1	-1	1	2	2	4	6	7	7	5	5	4	3	-6	-9	-9	-9	-9	-6	-6	-7	-6	
30	-8	-13	-14	-13	-7	-5	0	-3	-1	3	1	-2	-4	-4	-3	-4	-4	-2	-3	-6	-13	-11	-6	-8	

## HOURLY EQUATORIAL DST VALUES

JULY 1963

	UNIT=GAMMAS																			G.M.T.				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-9	-10	-7	-7	-7	-6	-3	1	3	3	1	2	4	8	8	2	0	0	-4	-3	-2	-3	-3	-4
2	-4	-4	-3	-2	-1	1	3	4	6	6	3	6	8	11	8	6	4	2	0	-3	-3	-2	4	8
3	10	7	8	7	8	8	9	10	10	8	9	11	11	10	9	9	7	8	6	4	5	6	6	6
4	10	14	17	16	16	13	10	8	8	12	19	20	20	17	16	8	4	2	-3	-11	-26	-36	-41	-35
5	-18	-11	-6	6	9	-9	-11	-10	-10	-10	-7	-3	-1	0	-2	-3	-5	-5	-8	-6	-2	-12	-14	-21
6	-12	1	7	-2	-4	-4	-13	-15	-12	-17	-16	-14	-12	-12	-13	-15	-15	-16	-13	-15	-16	-15	-18	-17
7	-14	-9	-8	-7	-7	-3	-1	-1	-2	-5	-4	-8	-6	-5	-7	-5	-3	-4	-2	-5	-8	-9	-13	-10
8	-10	-3	5	3	3	7	3	-0	2	2	1	2	5	7	6	-1	-1	4	10	7	5	0	-7	-14
9	-10	-0	-0	-3	0	-5	-5	-4	-6	-3	-3	-7	-7	-5	-3	-3	-2	1	-0	-3	-12	-21	-21	-17
10	-14	-10	-2	1	2	-2	-0	5	5	4	1	1	2	-1	-0	-0	4	7	5	0	-3	-10	-17	-17
11	-10	-3	-1	-2	4	2	2	3	4	1	-3	-7	-6	-4	-1	2	4	3	-1	-5	-6	-6	-8	
12	-6	-4	-4	-2	1	3	6	7	8	6	4	3	6	8	9	8	10	9	7	4	4	5	4	
13	2	6	9	10	11	11	10	10	10	6	6	7	9	7	3	4	4	-1	-1	-0	5	3	1	4
14	6	7	9	10	11	11	12	13	14	15	17	20	22	18	16	12	10	9	10	14	18	18	16	13
15	13	14	14	14	15	15	16	17	18	14	10	4	3	8	12	12	12	8	8	9	9	13	20	23
16	22	14	12	13	11	12	16	17	16	11	13	17	22	20	22	20	20	18	13	12	12	9	3	2
17	-5	-1	4	-2	-11	-11	-15	-14	-10	-19	-23	-24	-14	-17	-28	-35	-39	-38	-31	-25	-21	-19	-18	-16
18	-14	-11	-8	-8	-5	-4	-4	-1	0	-3	-8	-11	-11	-7	-8	-12	-10	-9	-6	-6	-10	-15	-22	-25
19	-20	-13	-5	-2	-1	-3	-1	1	-0	-2	-1	-5	-6	-3	-3	-0	-0	-4	-8	-8	-8	-10	-10	-7
20	-4	1	5	9	11	9	9	11	8	4	2	7	17	25	34	40	43	38	38	32	22	14	10	12
21	16	18	20	21	17	12	16	23	30	20	-9	-14	-9	-6	-3	-10	-12	-14	-19	-22	-21	-21	-22	-23
22	-20	-17	-14	-8	-6	-8	-7	-7	-14	-13	-12	-13	-17	-19	-21	-22	-30	-25	-21	-16	-12	-12	-13	-14
23	-12	-8	-3	4	5	1	-5	-3	-4	-4	-3	-4	-9	-7	-8	-4	-7	-13	-10	-9	-10	-16	-25	-24
24	-15	-12	-13	-18	-23	-26	-18	-14	-15	-15	-16	-12	-13	-14	-12	-14	-20	-19	-20	-18	-15	-18	-17	-18
25	-14	-11	-11	-9	-10	-6	-16	-12	-9	-7	-4	-3	-5	-6	-8	-7	-9	-10	-4	-5	-10	-13	-18	-19
26	-20	-15	-13	-8	-4	-2	-4	-5	-6	-3	-0	-2	-6	-12	-13	-7	-4	1	-1	-10	-16	-22	-22	-14
27	-7	-11	-17	-14	-11	-16	-16	-12	-12	-8	-7	-10	-7	-7	-10	-11	-5	-1	-4	-9	-13	-15	-18	
28	-17	-7	-13	-12	-11	-10	-10	-10	-8	-7	-4	-8	-11	-14	-16	-16	-16	-12	-8	-2	2	0	-3	-4
29	-6	-5	-4	-3	-1	-1	0	1	1	1	3	4	4	-1	-1	6	9	13	16	14	11	5	-0	-7
30	-7	-5	-3	-2	-7	-7	-7	-22	-20	-15	-9	-7	-9	-7	-7	-2	-2	-7	-11	-18	-16	-20	-19	-17
31	-6	-13	-17	-19	-9	-9	-15	-16	-10	-8	-9	-6	-12	-6	-2	-0	0	2	-4	-4	-4	-1	-6	-10

## HOURLY EQUATORIAL DST VALUES

AUGUST 1963

	UNIT=GAMMAS																								G.M.T.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-8	-11	-1	2	3	-1	-2	-3	-3	-5	-8	-8	-10	-9	-10	-11	-13	-9	-4	-1	-5	-13	-13	-13	
2	-8	-8	-11	-10	-10	-8	-6	-10	-11	-11	-15	-20	-19	-15	-10	-9	-4	-2	-1	0	-0	-3	-3	-1	
3	-3	-7	-8	-8	-8	-6	-7	-5	-8	-9	-8	-8	-4	-0	2	5	9	10	10	11	6	-0	-4	-9	
4	-7	-7	-10	-6	-4	-4	-8	-11	-9	-12	-13	-21	-23	-21	-11	-6	-4	-1	-2	-7	-14	-17	-17	-12	
5	-9	-11	-8	-11	-9	-7	-7	-10	-10	-14	-12	-15	-16	-7	-0	3	4	4	4	0	-2	-10	-15	-14	
6	-13	-10	-11	-11	-14	-18	-16	-13	-16	-14	-15	-14	-12	-7	-2	1	5	5	9	9	7	-0	-4	-6	
7	-5	-4	-8	-8	-7	-7	-5	-5	-9	-10	-12	-8	-4	-3	-0	1	3	5	8	5	2	-0	-0	-0	
8	1	2	1	2	0	5	4	-1	-4	-4	-5	-6	-4	2	9	12	14	14	15	16	17	14	11	8	
9	5	12	5	-5	-11	-10	-8	-13	-16	-13	-8	-5	-8	-12	-11	-7	-2	1	1	7	9	14	11	10	
10	8	10	13	12	13	13	11	7	6	6	7	7	8	4	3	-6	1	4	2	8	12	12	9	9	
11	9	9	9	8	6	5	8	9	10	9	9	8	7	7	4	1	2	3	4	3	2	2	4	5	
12	7	6	5	6	9	4	1	2	4	7	9	8	4	4	9	6	8	7	7	6	7	8	9	10	
13	10	6	4	5	6	7	8	7	6	7	6	6	6	5	5	8	9	11	11	12	12	9	8	7	
14	4	8	8	5	7	9	7	6	5	4	6	6	7	9	11	15	20	20	21	23	25	26	24	21	
15	19	20	20	20	21	23	23	20	19	19	22	24	26	22	21	24	23	23	16	8	0	-8	-7	4	
16	7	6	3	1	1	2	3	1	-2	-3	-2	1	3	5	6	8	6	4	8	8	9	7	5	3	
17	2	9	11	9	6	9	6	4	2	1	-2	1	2	5	10	12	11	18	24	21	12	1	0	3	
18	3	1	-2	-7	-7	-13	-14	-14	-3	10	-3	-2	-2	-20	-27	-25	-23	-19	-21	-23	-21	-24	-17	-16	
19	-13	-14	-17	-18	-18	-14	-12	-12	-11	-13	-14	-12	-11	-8	-5	-6	-0	-11	-40	-39	-46	-58	-79	-83	
20	-84	-74	-58	-59	-63	-71	-74	-68	-69	-64	-60	-61	-61	-53	-49	-47	-49	-46	-43	-39	-35	-34	-32	-33	
21	-25	-30	-28	-30	-30	-36	-36	-35	-40	-41	-43	-39	-40	-43	-44	-38	-31	-27	-29	-26	-25	-21	-25	-29	
22	-27	-27	-28	-26	-26	-26	-27	-27	-24	-22	-20	-22	-25	-25	-26	-21	-19	-17	-15	-11	-11	-18	-24	-24	
23	-24	-27	-32	-35	-42	-42	-40	-35	-35	-33	-37	-43	-47	-42	-37	-31	-29	-32	-33	-29	-25	-23	-21	-25	
24	-28	-24	-28	-31	-28	-26	-26	-25	-24	-25	-24	-23	-25	-28	-34	-31	-23	-21	-25	-30	-27	-20	-21	-17	
25	-14	-13	-15	-18	-22	-23	-18	-18	-19	-17	-18	-19	-19	-7	-3	-3	-1	2	5	3	0	-4	-10	-11	
26	-12	-5	-4	-5	-9	-14	-15	-14	-14	-13	-14	-12	-7	-6	-6	-9	-9	-10	-15	-9	-6	-4	-1		
27	1	2	-0	-5	-3	-5	-2	3	3	1	-1	-6	-4	-5	-7	-9	-3	-9	-21	-27	-16	-19	-22	-18	
28	-13	-7	-6	-11	-15	-17	-15	-11	-11	-10	-16	-18	-19	-17	-16	-19	-21	-27	-31	-32	-21	-25	-29	-20	
29	-15	-12	-11	-16	-19	-16	-13	-9	-12	-13	-19	-15	-12	-8	-15	-16	-13	-11	-14	-18	-15	-14	-12	-11	
30	-9	-10	-12	-14	-16	-16	-14	-13	-12	-12	-12	-11	-9	-11	-15	-19	-23	-19	-20	-22	-12	-7	-4	-6	
31	-9	-8	-11	-9	-9	-12	-8	-5	-7	-8	-7	-4	-3	-15	-25	-30	-31	-28	-18	-14	-12	-13	-18	-15	

## HOURLY EQUATORIAL DST VALUES

SEPTEMBER 1963

	G.M.T.																							
	UNIT=GAMMAS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-15	-16	-15	-14	-15	-13	-9	-6	-10	-8	-8	-6	-7	-10	-10	-16	-22	-25	-31	-33	-28	-24	-21	-20
2	-19	-17	-15	-17	-18	-17	-14	-11	-8	-9	-10	-11	-11	-7	-6	-5	-4	-2	-8	-14	-8	-4	0	3
3	-3	-11	-12	-11	-10	-16	-14	-8	-5	-7	-9	-7	-3	-3	-11	-9	-10	-16	-19	-21	-23	-21	-22	-19
4	-14	-9	-7	-6	-9	-11	-6	-1	-1	-5	-9	-10	-7	-2	1	2	1	-3	-5	-5	-3	-9	-12	-17
5	-12	-6	-8	-10	-13	-12	-9	-4	-1	-1	0	2	10	11	16	14	10	-0	-6	-9	-13	-13	-10	-8
6	-10	-7	-1	0	-1	-2	-4	-2	-4	-2	-6	-10	-13	-15	-14	-15	-15	-17	-17	-15	-9	-5	-2	-2
7	-4	-3	-1	-0	-3	-4	-4	-2	-2	-2	-1	3	6	4	0	-2	0	3	4	4	0	-0	-4	-0
8	-2	-2	3	4	-5	-12	-8	-7	-3	-2	-7	-14	-15	-16	-16	-18	-22	-32	-38	-35	-27	-18	-12	-8
9	-4	-1	-5	-12	-19	-18	-9	-6	-5	-7	-1	1	-1	-9	-15	-14	-14	-14	-17	-19	-19	-15	-16	-16
10	-15	-11	-11	-10	-11	-10	-8	-5	-1	-1	-3	-3	0	-1	-3	-6	-12	-13	-15	-14	-9	-8	-13	-16
11	-17	-6	-7	-11	-13	-13	-9	-1	1	-9	-5	-5	1	1	-4	-9	-16	-28	-34	-42	-37	-33	-24	-20
12	-18	-16	-18	-18	-21	-20	-11	-10	-5	-1	-4	-2	-1	-5	-10	-12	-12	-13	-16	-22	-27	-27	-25	-21
13	-17	-12	-8	-8	-11	-11	-8	-2	1	2	-0	0	0	0	0	-2	-2	1	1	1	-2	-7	-13	-14
14	-10	-23	-27	-28	-20	-5	-11	-48	-80	-72	-74	-67	-80	-89	-104	-112	-113	-110	-114	-100	-93	-85	-76	-71
15	-62	-51	-45	-44	-48	-46	-44	-35	-28	-29	-26	-34	-40	-50	-47	-47	-53	-61	-75	-77	-78	-77	-76	-68
16	-56	-52	-51	-49	-47	-46	-42	-41	-38	-37	-41	-37	-40	-45	-50	-57	-54	-52	-57	-65	-60	-57	-53	-57
17	-54	-41	-37	-34	-42	-44	-39	-33	-44	-55	-62	-57	-53	-55	-61	-69	-70	-66	-76	-69	-61	-56	-52	-49
18	-53	-49	-42	-40	-41	-40	-35	-30	-35	-39	-38	-36	-41	-45	-50	-55	-59	-59	-56	-55	-48	-42	-40	-37
19	-36	-37	-32	-33	-34	-29	-25	-23	-18	-23	-24	-33	-34	-39	-53	-64	-63	-62	-56	-56	-51	-45	-43	-38
20	-37	-32	-31	-32	-34	-31	-25	-22	-21	-19	-17	-18	-21	-29	-39	-47	-50	-44	-39	-42	-47	-51	-52	-57
21	-52	-46	-41	-37	-31	-34	-29	-25	-23	-25	-21	-22	-22	-25	-18	-30	-39	-77	-53	-38	-47	-43	-26	-19
22	-20	-18	-25	-47	-72	-94	-110	-113	-101	-98	-92	-84	-76	-90	-92	-88	-66	-72	-49	-47	-72	-119	-120	-147
23	-223	-241	-206	-205	-185	-151	-145	-132	-117	-108	-100	-88	-79	-78	-85	-89	-88	-80	-73	-68	-72	-80	-82	
24	-81	-78	-73	-71	-66	-62	-62	-56	-52	-58	-57	-58	-59	-62	-65	-69	-71	-72	-79	-94	-96	-105	-109	-111
25	-109	-81	-87	-105	-96	-93	-86	-89	-95	-87	-76	-62	-54	-56	-64	-73	-76	-77	-71	-66	-63	-60	-61	-58
26	-49	-45	-42	-44	-50	-53	-54	-45	-46	-48	-52	-54	-52	-51	-51	-51	-58	-59	-57	-54	-53	-55	-64	-62
27	-56	-48	-39	-36	-39	-38	-34	-32	-32	-34	-32	-32	-32	-37	-42	-40	-39	-39	-42	-39	-46	-48	-67	-67
28	-73	-59	-53	-60	-67	-63	-63	-57	-52	-47	-41	-41	-48	-64	-65	-68	-61	-61	-58	-67	-62	-64	-52	-45
29	-46	-41	-43	-41	-43	-44	-39	-40	-38	-39	-40	-37	-38	-34	-36	-37	-36	-44	-47	-55	-54	-45	-44	-39
30	-40	-36	-36	-35	-33	-32	-35	-31	-30	-32	-30	-27	-27	-28	-31	-32	-31	-32	-33	-33	-34	-33	-31	-29

## HOURLY EQUATORIAL DST VALUES

OCTOBER 1963

	UNIT=GAMMAS																								G.M.T.
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	-29	-28	-28	-29	-31	-31	-30	-30	-30	-29	-28	-30	-28	-25	-26	-27	-29	-32	-38	-40	-40	-38	-35	-33	
2	-32	-29	-27	-24	-24	-23	-21	-20	-16	-14	-12	-12	-13	-17	-17	-19	-20	-19	-19	-20	-15	-12	-9	-9	
3	-11	-11	-12	-15	-17	-17	-16	-15	-15	-19	-18	-13	-12	-14	-19	-20	-19	-19	-19	-20	-18	-17	-16	-13	
4	-13	-13	-13	-14	-19	-21	-22	-19	-21	-18	-16	-15	-9	-10	-18	-26	-27	-26	-25	-24	-22	-23	-22	-21	
5	-19	-11	-8	-6	-5	-3	3	-1	-6	-11	-12	-8	-5	-4	-6	-10	-14	-18	-18	-16	-14	-15	-18	-17	
6	-14	-14	-12	-13	-12	-14	-15	-13	-13	-13	-11	-12	-12	-14	-15	-17	-20	-22	-17	-10	-8	-8	-10	-12	
7	-11	-4	2	-1	-1	-0	-4	-3	-5	-1	1	3	3	0	-4	-6	-14	-15	-13	-7	-5	-14	-29	-27	
8	-22	-22	-23	-18	-20	-27	-27	-22	-20	-19	-19	-16	-23	-23	-22	-22	-25	-20	-18	-15	-15	-15	-15	-17	
9	-16	-15	-16	-17	-18	-15	-14	-17	-19	-15	-12	-11	-10	-10	-9	-9	-10	-13	-18	-15	-16	-15	-15	-14	
10	-20	-14	-8	-4	-1	3	6	3	-6	-6	-1	-3	-8	-13	-13	-10	-7	-6	-9	-12	-20	-24	-24	-25	
11	-26	-21	-18	-17	-15	-13	-16	-15	-14	-15	-16	-20	-29	-34	-28	-30	-39	-31	-29	-29	-28	-27	-33	-38	
12	-37	-38	-35	-41	-34	-31	-28	-25	-23	-18	-19	-24	-24	-31	-33	-42	-49	-48	-42	-37	-43	-42	-37	-29	
13	-26	-28	-31	-34	-28	-27	-31	-33	-31	-26	-21	-20	-25	-22	-25	-27	-23	-20	-22	-21	-23	-22	-25	-31	
14	-40	-52	-50	-42	-40	-36	-39	-37	-33	-27	-28	-32	-38	-42	-39	-42	-54	-54	-45	-34	-34	-33	-33	-33	
15	-31	-30	-28	-29	-25	-28	-26	-29	-26	-23	-23	-28	-28	-25	-23	-18	-16	-18	-22	-21	-22	-22	-23	-28	
16	-31	-31	-31	-27	-28	-28	-26	-26	-28	-30	-32	-32	-35	-34	-36	-38	-37	-33	-38	-39	-33	-30	-33	-33	
17	-30	-27	-25	-24	-24	-24	-28	-32	-32	-33	-33	-32	-34	-31	-29	-30	-30	-29	-27	-28	-28	-26	-26	-27	
18	-29	-29	-28	-25	-26	-27	-31	-33	-36	-35	-32	-28	-26	-26	-25	-24	-23	-22	-25	-30	-33	-32	-33	-34	
19	-32	-30	-29	-28	-30	-31	-31	-29	-28	-26	-23	-23	-25	-21	-20	-23	-21	-16	-15	-18	-22	-24	-25	-28	
20	-30	-28	-29	-28	-26	-26	-27	-25	-23	-14	-5	-2	-9	-17	-15	-11	-9	-11	-17	-24	-28	-30	-36	-29	
21	-23	-22	-22	-24	-34	-29	-26	-22	-22	-18	-14	-14	-14	-17	-14	-17	-20	-19	-18	-15	-12	-11	-8	-9	
22	-10	-9	-8	-6	-3	-1	0	1	1	-2	-5	-3	0	4	7	8	8	8	12	13	13	12	11		
23	10	9	8	9	12	11	11	8	6	7	7	6	3	-2	-1	-3	-2	1	3	5	0	-2	-4	-13	
24	-24	-41	-56	-74	-68	-73	-75	-91	-109	-112	-112	-101	-95	-95	-101	-100	-91	-74	-64	-70	-69	-71	-64	-66	
25	-66	-55	-58	-55	-54	-52	-49	-53	-51	-45	-43	-44	-47	-47	-45	-43	-42	-42	-39	-37	-40	-42	-42	-40	
26	-40	-43	-40	-39	-34	-33	-34	-37	-36	-36	-36	-40	-38	-33	-29	-28	-29	-25	-23	-24	-23	-21	-15		
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29	-39	-35	-34	-36	-36	-35	-34	-33	-33	-35	-35	-33	-29	-25	-16	-22	-62	-86	-109	-129	-161	-180	-173	-180	
30	-177	-169	-142	-116	-107	-101	-89	-83	-69	-64	-62	-57	-54	-54	-55	-52	-52	-51	-46	-46	-48	-45	-49	-51	
31	-51	-47	-45	-43	-40	-40	-40	-38	-43	-36	-36	-35	-36	-37	-39	-41	-45	-45	-40	-36	-37	-36	-35	-37	

## HOURLY EQUATORIAL DST VALUES

NOVEMBER 1963

	UNIT=GAMMAS																			G.M.T.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-35	-36	-36	-39	-37	-37	-35	-37	-35	-32	-33	-35	-36	-34	-35	-36	-34	-32	-35	-33	-31	-32	-34	-31	
2	-31	-29	-28	-27	-26	-28	-27	-27	-30	-23	-20	-17	-20	-21	-27	-31	-45	-50	-41	-34	-35	-37	-37	-34	
3	-30	-26	-28	-33	-32	-35	-37	-39	-30	-34	-34	-34	-32	-31	-24	-22	-21	-21	-26	-32	-33	-32	-28	-27	
4	-24	-24	-22	-23	-25	-26	-26	-23	-21	-21	-23	-23	-24	-23	-22	-19	-20	-20	-18	-20	-24	-25	-26	-26	
5	-27	-27	-26	-22	-20	-19	-18	-14	-13	-13	-17	-22	-25	-25	-22	-21	-19	-17	-16	-15	-15	-15	-14	-14	
6	-12	-11	-7	-4	-1	4	4	-4	-9	-7	-10	-11	-5	-6	-18	-22	-16	-13	-11	-15	-24	-24	-19	-18	
7	-14	-17	-19	-23	-27	-32	-33	-27	-18	-17	-26	-32	-34	-38	-34	-35	-61	-73	-73	-59	-55	-53	-49	-46	
8	-48	-56	-45	-40	-44	-45	-31	-38	-31	-25	-25	-29	-37	-32	-39	-43	-47	-43	-36	-37	-40	-40	-44	-41	
9	-33	-35	-37	-39	-34	-32	-32	-27	-20	-18	-17	-17	-22	-23	-23	-38	-36	-35	-38	-49	-60	-55	-48	-48	
10	-43	-46	-43	-42	-44	-33	-31	-24	-21	-20	-20	-25	-30	-31	-29	-37	-43	-43	-41	-39	-33	-29	-34	-31	
11	-33	-32	-30	-31	-36	-38	-37	-28	-24	-24	-19	-20	-21	-21	-22	-25	-29	-26	-29	-36	-34	-27	-26	-25	
12	-24	-26	-25	-24	-29	-32	-33	-34	-27	-27	-27	-27	-24	-21	-22	-29	-38	-42	-38	-34	-29	-29	-27	-26	
13	-25	-24	-25	-24	-23	-22	-23	-22	-22	-21	-19	-19	-19	-20	-23	-26	-26	-24	-22	-21	-20	-19	-18	-20	
14	-19	-19	-18	-18	-22	-22	-22	-18	-16	-14	-14	-13	-11	-11	-12	-13	-14	-15	-14	-14	-14	-14	-16	-17	
15	-20	-22	-17	-15	-17	-17	-16	-14	-11	-7	-7	-8	-11	-9	-11	-12	-13	-15	-14	-13	-13	-14	-15	-14	
16	-14	-14	-14	-15	-16	-17	-17	-15	-12	-9	-5	-3	-2	-3	-4	-4	-5	-5	-4	-4	-6	-9	-8	-3	
17	-1	-3	-2	-3	-4	-5	-4	1	3	24	21	11	13	15	-5	-26	-35	-24	-13	-8	-13	-20	-21	-18	
18	-21	-22	-22	-21	-24	-25	-26	-24	-24	-22	-18	-14	-12	-13	-13	-14	-15	-16	-18	-19	-18	-16	-15	-15	
19	-15	-13	-12	-12	-12	-11	-11	-11	-13	-14	-17	-15	-12	-12	-12	-13	-12	-11	-12	-12	-10	-9	-8	-8	
20	-9	-6	-7	-12	-11	-7	-6	-2	1	-1	-5	-5	-5	-4	-7	-7	-7	-4	-3	-5	-8	-6	-4	-1	
21	1	2	2	0	-1	-1	-1	1	4	0	-5	-4	-3	-6	-5	-5	-6	-8	-9	-9	-8	-7	-7	-8	
22	-7	-6	-5	-3	-2	-3	-0	0	2	3	-2	-4	5	14	17	19	8	-7	-18	-16	-13	-13	-9	-9	
23	-12	-12	-14	-13	-7	-4	-4	-7	-9	-12	-13	-8	-7	-6	-4	-3	-4	-5	-6	-9	-14	-11	-8	-7	
24	-7	-5	-7	0	-0	-1	-3	-1	-3	-1	-1	-12	-22	-23	-30	-36	-47	-46	-48	-60	-64	-58	-63	-63	
25	-56	-43	-46	-45	-42	-42	-39	-33	-30	-31	-32	-29	-28	-26	-25	-25	-29	-29	-22	-20	-17	-15	-14	-15	
26	-16	-17	-18	-17	-16	-17	-13	-10	-11	-16	-17	-19	-18	-18	-18	-15	-16	-17	-17	-16	-14	-11	-9	-8	
27	-8	-8	-9	-10	-14	-16	-17	-13	-16	-18	-13	-7	-6	-4	-5	-6	-4	-3	-6	-5	-6	-9	-8	-7	
28	-6	-6	-9	-18	-16	-13	-7	-4	-3	-6	-8	-6	-6	-3	-1	-4	-6	-7	-6	-5	-2	-1	-2	-3	
29	-3	-5	-6	-9	-11	-13	-11	-5	0	3	7	5	4	6	8	6	5	7	9	6	4	-1	0	-5	
30	-16	-16	-14	-14	-13	-10	-4	-3	-2	-4	-9	-15	-23	-11	-5	-6	-16	-18	-27	-26	-20	-14	-11	-9	

## HOURLY EQUATORIAL DST VALUES

DECEMBER 1963

	UNIT=GAMMAS																		G.M.T.					
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-11	-11	-10	-12	-11	-8	-7	-8	-8	-10	-10	-10	-9	-8	-6	-8	-7	-9	-10	-7	-5	-4	1	4
2	7	8	9	1	-4	-8	-14	-14	-9	-8	-9	-8	-8	-8	-13	-15	-12	-12	-19	-15	-9	2	9	12
3	4	-5	-6	-9	-6	7	1	-14	-15	-16	-16	-18	-26	-35	-32	-27	-31	-33	-35	-42	-39	-27	-26	-24
4	-23	-23	-22	-22	-23	-24	-25	-23	-21	-19	-16	-16	-23	-23	-20	-24	-26	-31	-25	-21	-19	-32	-45	-40
5	-29	-34	-35	-30	-27	-23	-29	-26	-24	-20	-21	-21	-20	-23	-34	-27	-28	-25	-28	-30	-30	-40	-37	-30
6	-25	-26	-27	-26	-21	-17	-18	-18	-11	-12	-14	-15	-21	-20	-23	-17	-14	-15	-18	-25	-29	-24	-20	-18
7	-17	-16	-17	-18	-20	-21	-18	-21	-24	-22	-20	-18	-19	-18	-13	-20	-21	-19	-18	-15	-18	-17	-19	-18
8	-17	-15	-14	-15	-19	-16	-17	-22	-27	-29	-28	-25	-26	-27	-24	-21	-20	-21	-20	-20	-19	-14	-14	-15
9	-16	-14	-13	-13	-15	-16	-18	-17	-18	-14	-13	-13	-16	-20	-22	-17	-10	-7	-6	-7	-6	-6	-9	
10	-9	-9	-10	-11	-10	-8	-7	-7	-9	-7	-5	-5	-6	-6	-6	-5	-5	-7	-8	-8	-6	-3	-1	-4
11	-4	-3	-2	-2	-1	-1	-2	-3	-5	-6	-6	-2	-0	-1	-1	-1	-2	-3	-3	-1	4	7	5	1
12	-2	-2	-3	-4	-4	-3	-6	-7	-7	-4	-4	-4	-2	-0	2	1	-0	-0	1	1	6	9	1	
13	-4	1	1	1	-4	-15	-9	-4	-5	-0	-0	-3	-10	-12	-7	-2	-1	0	1	0	-0	3	4	3
14	2	2	-1	-5	-4	-0	-1	-5	-12	-9	-6	-4	-3	-1	-1	-9	-12	-5	-2	-9	-20	-17	-11	-10
15	-10	-12	-14	-16	-15	-16	-13	-13	-16	-21	-21	-24	-19	-15	-12	-13	-19	-19	-16	-12	-9	-7	-6	-6
16	-10	-10	-9	-11	-12	-10	-9	-10	-10	-10	-12	-14	-18	-19	-13	-10	-6	-3	-6	-8	-6	-4	-5	-8
17	-8	-5	-6	-6	-6	-6	-8	-10	-11	-10	-9	-9	-10	-11	-10	-8	-8	-6	-8	-8	-6	-3	-2	
18	2	2	1	-3	-4	-3	-1	-1	0	0	-6	-1	1	2	2	0	1	3	5	4	-0	-1	-1	
19	-1	-2	-1	0	1	3	2	-0	1	4	5	4	1	3	7	4	3	1	3	5	15	17	4	-10
20	-4	-4	-0	10	12	5	-12	-13	-16	-13	-12	-13	-16	-11	-10	-12	-13	-12	-11	-19	-24	-21	-17	-17
21	-17	-14	-13	-11	-6	-5	-6	-7	-14	-10	-7	-7	-3	-9	-5	-2	-12	-12	-8	-9	-8	-6	-12	-18
22	-14	-13	-12	-11	-15	-17	-17	-16	-15	-14	-18	-23	-26	-26	-15	-7	-9	-9	-21	-20	-17	-13	-14	-15
23	-17	-17	-16	-14	-15	-17	-21	-16	-21	-20	-19	-19	-19	-15	-13	-13	-22	-25	-18	-19	-14	-10	-12	-14
24	-16	-22	-20	-16	-13	-12	-14	-16	-18	-14	-14	-16	-18	-20	-15	-12	-10	-13	-12	-10	-9	-11	-10	-8
25	-9	-9	-10	-11	-9	-9	-11	-12	-12	-11	-8	-12	-16	-19	-15	-13	-11	-8	-6	-6	-8	-7	-7	
26	-9	-9	-11	-9	-12	-13	-12	-10	-8	-6	-10	-15	-20	-18	-13	-12	-13	-11	-10	-9	-8	-7	-9	-10
27	-12	-12	-11	-12	-9	-5	-4	-3	-5	-1	-3	-8	-13	-7	-2	2	-2	-2	-2	-4	-1	3	6	5
28	4	-0	-3	-3	-1	1	3	3	7	3	3	2	-0	-5	-4	-1	-1	-2	-3	-4	-9	-4	-1	3
29	3	-0	6	7	5	4	1	-1	3	7	5	-16	-35	-39	-38	-39	-40	-33	-33	-25	-21	-23	-23	-21
30	-18	-20	-17	-15	-13	-15	-21	-23	-20	-13	-14	-15	-16	-15	-15	-13	-14	-15	-17	-18	-17	-16	-16	-15
31	-14	-14	-13	-11	-9	-9	-12	-12	-10	-13	-13	-11	-11	-12	-10	-7	-8	-8	-7	-7	-11	-13	-12	-11

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